

1999

Is Old Bridge High School Meeting The Needs Of All Students' Knowledge With Respect To The HIV/Aids Curriculum?

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**IS OLD BRIDGE HIGH SCHOOL MEETING THE NEEDS OF ALL STUDENTS'
KNOWLEDGE WITH RESPECT TO THE HIV/AIDS CURRICULUM?**

By

DAWN FORGERSON

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**Submitted in partial fulfillment of the requirements for the
Degree of Doctor of Education
Seton Hall University
1999**

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ABSTRACT

Is Old Bridge High School Meeting the Needs of All Students' Knowledge with Respect to the HIV/AIDS Curriculum?

By

Dawn M. Forgerson

Acquired Immunodeficiency Syndrome (AIDS) has quickly become one of the three leading causes of death among women and men 25-44 years old in this country. In 1998, there were 24,437 cases of AIDS reported among the 25-29 year olds. Since the average incubation period for AIDS is ten years, many of these 25-29 year olds were infected as teens. The most powerful weapon that appears to diminish the spread of AIDS is knowledge/education.

This study had four purposes. The first purpose was to identify any gaps in the Human Immunodeficiency Syndrome Virus/AIDS curriculum. The second was to identify high-risk groups of teens. The third was to assess if further HIV/AIDS training and education to high school staff was needed to help the teachers be more comfortable with teaching information on HIV/AIDS. The fourth purpose of the study was to identify areas to improve the effectiveness of HIV/AIDS education to ensure that students lead a long, healthy life. Students were assessed in grades 9-12 on their level of knowledge relative to HIV/AIDS education. Paired sample t-tests were used to compare the pre-training scores to the post-training scores for all 478 participants by gender, grade and by age. Students' and teachers' perceptions of the HIV/AIDS curriculum were also assessed. The students' and health teachers' perceptions of the HIV/AIDS curriculum were

calculated by using the number and percent of students and teachers indicating yes or no on the questionnaire.

Significant findings were discovered in the following areas: (a) The overall knowledge mean for all participants was significantly higher in the post-training score than in the pre-training score; (b) males had a significant increase from the pre-test to the post-test scores; (c) females scored higher than the males in both the pre and post tests; (d) the post-training mean for the 9th graders was significantly higher than the pre-training mean; (e) the pre-post difference was significant for the 14, 15 and 18 year olds.

A significant correlation was found indicating that students with a higher post-training score tended to indicate greater satisfaction with their ability to make decisions regarding HIV/AIDS than students with lower post-training scores.

ACKNOWLEDGMENTS

The author wishes to acknowledge the distinct privilege of being accepted to the first cohort of Seton Hall University's Executive Ed.D. Program. The profound power of being a member of such an intelligent and enthusiastic group is unfounded. The team of professors that established such a program should be credited not only for the creation and establishment of the program but also for their continued positive support throughout the entire cohort experience.

I especially want to thank my committee members, Dr. Mitchell, Dr. Hayden and Dr. Huslage for their direction and also my mentor Dr. Shay who "cracked the whip" in a way which motivated me to forge ahead to the next assignment until all were completed. His light humor eliminated just enough pressure for me to be able to continue to focus on my study.

A special thank you is extended to both the Superintendent of Schools, Dr. Daniel Rodriguez and Principal of Old Bridge High School, Dr. Christopher Traficante, for allowing me to conduct the study in the Old Bridge High School. Also, a special thank you is extended to Sara Kleinman from the State Department of Education, specifically HIV/AIDS education, for sending me pertinent materials and expressing an interest in reading my final paper. And last but not least, a warm thank you to my friends and family who continued to give me words of encouragement along the way.

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CHAPTER I

Introduction

This chapter provides the background and the theoretical framework upon which the study is based. The purpose of the study is to determine whether Old Bridge High School is meeting the needs of all students' knowledge with respect to the HIV/AIDS curriculum.

From the purpose of the study, six hypotheses were designed to glean further information that may prove fruitful for Old Bridge Board of Education in terms of improving the HIV/AIDS curriculum. The first hypothesis of this study is that all students who participate in HIV/AIDS training will indicate a significant increase in HIV/AIDS knowledge. The second hypothesis is that the increase in HIV/AIDS knowledge will be greater for the 9th and 12th grade students than for the 10th and 11th grade students. The third hypothesis is that a significant relationship will exist between knowledge scores and perceptions of preparedness regarding HIV/AIDS decisions. The fourth hypothesis is that teachers will indicate significantly greater coverage of the HIV/AIDS curriculum than the students. The fifth hypothesis is that students will indicate less comfort than teachers in talking about high-risk behavior and co-ed classes. The last hypothesis is that teachers will indicate less comfort than students in materials, administration, logistics, and parental concerns.

Background of the Problem

The Department of Health and Human Services (1990) states among all sexually active people, teenagers have the highest rate of sexually transmitted diseases (STD) of any age group. Kirby, et. al, found, in 1991, the rate of gonorrhea among 15-19 year old females was 22 times higher (1,043 per 100,000) than the rate for women ages 30 or older (48 per 100,000). Approximately, one in four young people have been infected by some STD by age 21. An increasing number of adolescents are becoming infected with the human immunodeficiency syndrome virus (HIV). Although relatively few of the reported acquired immunodeficiency syndrome (AIDS) cases have occurred among adolescents, about one-fifth have occurred among persons in their twenties. Because the average incubation period is about ten years, many of these 20-29 year olds were infected as teenagers (Kirby et al., 1994). because six or more by March 1993, there were 10,949 AIDS cases reported among 20-29 year olds and 44,171 among 25-29 year olds (Center for Disease Control, 1993). These young persons represent 20% of people living with AIDS. These consequences of adolescent sexual behavior, in turn, have long term effects upon the lives of young people. HIV and other STD's among youth can affect their physical health, their subsequent ability to bear children, and even their chances for a normal lifespan. AIDS has quickly become one of the three leading causes of death among women and men 25-44 years old in this country (Kirby et. al.; Smith, K. W., McGraw, S. A., Crawford, S. L., Costa, L. A., & McKinlay, J. E., 1993).

Because the incidence of pregnancy and STD's among teenagers is so great, these consequences affect not only the individuals involved and their families, but also overall welfare dependency, unemployment, and medical costs in the United States. For example, each year through just three programs alone (Aid to Families and Dependent

Children [AFDC], food stamps and Medicaid), the United States spends more than 25 billion dollars (\$25,000,000,000) for families with children born in preceding years to teenagers (Kirby et. al., 1994).

Hein (1992) stated that HIV has moved well beyond coastal urban areas and has spread throughout the country. Adolescent AIDS cases has increased 77% in the past two years. Although adolescents account for only 1% of all reported cases, a look at prevalent and new HIV cases reveal a far greater problem. In the Job Corps, the military, and selected populations of adolescents, the heterosexual spread of HIV accounts for a large proportion of cases in adolescents 13-21 years than in adults. Females tend to be much younger, with the highest HIV seroprevalence among women often seen in 15-19 year old girls (Center for Population Options, 1992).

Most of the literature examining the various paths by which children become sexually active focuses on psychological and social characteristics that may affect the risk of early sexual initiation (Mott, F., Fondell, M., Hu, P., & Menaghan, E., 1995). Some research, however, has focuses on the effects of biological factors. For example, Udry (1988) and Udry and Newcomer (1984) have documented that a mother's age at puberty is similar to that of her own children. Also, the children of women who were sexually active at an early age are more likely than other children to have sex at an early age.

Because of the apparent connection between early sex and various socially unacceptable adolescent activities, included are two items that are not available in most data sets: (a) measure of the mother's involvement in antisocial activities, and (b) her use of controlled dangerous substances (CDS) during her adolescence, as well as her age at menarche and age at first sexual experience. The researchers also state that importance

of the mother's biological and psychological traits and her behavior during adolescence, as predictors of the age at which her child becomes sexually active. Further, demographic and socioeconomic studies have found significant associations between early sexual activity and factors such as family economic disadvantages, large family size, minority group status, an unstable environment and low maternal education.

National surveys of students also have determined the extent to which they receive HIV education in school. A number of characteristics are evident in these studies. First, considerable variation was found in the estimates of HIV education. Second, samples were not always representative of populations from which they were drawn. Third, samples did not always include all grade levels. Representative, broad-based information at each level of analysis can help determine the status of HIV education (Holtzman et. al., 1992).

In recent years, numerous HIV prevention programs were introduced in school settings, but results were mixed. However, current approaches to school based AIDS education are being developed from a stronger theoretical framework, applying the previous experience of other prevention efforts, and program evaluations (Levy et. al., 1995).

"Getting real" about HIV in adolescents means acting on what is now known about the epidemic among youth. It is time for bold steps, not timid reflections (Hein, 1992). Purpose of the Study

There is conflicting research about the outcomes of the HIV/AIDS education being taught to our youth in the secondary schools in New Jersey. Old Bridge School

District needs to prepare for the incoming Core Curriculum Standards mandated by the state of New Jersey due to be in place by September of 1999.

The purpose of the study is to:

1. Identify gaps in the curriculum and any related problems with policies relative to HIV/AIDS in Old Bridge High School and ensure the new curriculum adheres to the New Jersey Core Curriculum Standards.
2. Identify high- risk groups of teens in need of HIV/AIDS education and prevention and provide the necessary education to those students in age appropriate teaching units.
3. Assess whether further HIV/AIDS training and education to high school staff is needed to assist health teachers be more comfortable with teaching HIV/AIDS.
4. Identify areas for improving the effectiveness of HIV/AIDS education in the Old Bridge School District to provide a curriculum with a solid knowledge base of health education specifically HIV/AIDS to ensure their students all the possibilities of leading a healthy life.

There will be an evaluation of the knowledge of Old Bridge High School students concerning HIV/AIDS and their perceptions of the curriculum presently being taught in Old Bridge High School. Each student fulfilling their health requirement during the second marking period grades 9-12, will be pre- and post-tested with the MAGI HIV/AIDS questionnaire. At the end of the HIV/AIDS unit, the HIV/AIDS post-test survey will be administered to the each class. A perception survey will also be administered at the time of the post survey in order to collect data regarding the student's

perceptions of the present HIV/AIDS curriculum at Old Bridge High School. The survey will be developed by using selected questions, which have been provided by the State Department of Education. Some of the questions from the 1998 School Health Education Profile will be included. The data will be collected in order to evaluate the impact of the school's HIV/AIDS curriculum. The health teachers will be given a School Health Educator Profile, which will be completed by the health teachers of Old Bridge High School and will then be compared to the findings of the New Jersey State Department of Education. The results from the health teacher's perceptions will also be compared to the findings of the student's perceptions. All of the findings will be evaluated and the appropriate recommendations will be made to the Old Bridge Board of Education in order to improve the curriculum. With this new information, it will hopefully be possible to make the necessary changes to the curriculum to be in alignment with the New Jersey Core Curriculum Standards; as well it may be possible to enhance student learning so the students of Old Bridge will live long and healthy lives. In the future hopefully other districts will model this work and continue to improve their HIV/AIDS education, which may enhance the entire HIV/AIDS education arena in the state of New Jersey and possibly the world.

Theoretical Framework

The New Jersey State Department of Education mandated an HIV/AIDS curriculum in the secondary schools. Success is possible when HIV education is comprehensive, integrated with other risk reduction issues (e. g. drugs and sexuality), and provides skill-building and active learning opportunities for very young teens. Further, results suggest that given the relatively large number of students already sexually active

by the seventh grade, a need exists for HIV/AIDS education to begin at an earlier age (Levy et. al., 1995). Just more than half of middle school teachers talk about sexual violence or contraception and condoms, only two-fifths discuss sexual expression without risk. Research suggests schools need to get the students' attention before they become sexually active, in order to have more of an effect on the students. This information suggests middle school teachers do not take a strong stand on appropriate behavior. Instructional approaches over emphasize lecture and recitation, and make too little use of role-playing and peer leadership. Moreover, condom distribution is essentially nonexistent (Firestone, 1994).

Cortese (1993) claims that schools can play a role both in promoting healthy lifestyles and in helping children and youth to modify negative behaviors. Additionally, the nation's serious drug problem calls for skill-building in children and youth and the devastating effect of HIV/AIDS requires urgent educational intervention. History has taught us well. We cannot have meaningful, effective health education programs in schools by merely responding to the crisis of the day. By so doing, the program, not the health program, ultimately disappears. A comprehensive, well-planned program includes a framework that allows for the inclusion of the crisis of the day appropriately and in proper relationship to other major health concepts. The new problem does not disrupt the entire school program. Such a program can help children and youth prepare to make wise decisions through life.

New Jersey State Department of Education approved the information that needs to be included in the HIV/AIDS curriculum, not a specific curriculum change. Although almost every New Jersey public school student is exposed to sexuality education, the kind

of education provided does not match the profile of programs that have been most successful in helping teenagers avoid pregnancy, HIV/AIDS, and other STD's. New Jersey students spend very little time on sexuality education. Few teachers address key prevention-orientation topics. Topics that are difficult because of strong taboos (e.g. masturbation or controversy abortion and contraception) also receive limited attention (Firestone, 1994).

Instructional materials exist that are widely used and are specifically focused on HIV/AIDS prevention. The following programs were considered to be among the successful programs: (a) *Becoming a Responsible Teen*, (b) *Reducing the Risk, Be Proud! Be Responsible!*, and (c) *Get Real About Aids*. In the next chapter, further descriptions of what is needed to have a successful HIV/AIDS curriculum is discussed (Kirby, 1997).

Staff may be in need of further HIV/AIDS education/prevention especially to promote the health teachers to be more comfortable with the subject of HIV/AIDS. Sex educators tend to be self-selected. They are individuals who have become interested and concerned about the subject from their own professional or personal experiences. When a school decides it will implement a sex education program, these teachers typically step forward to volunteer. Teacher interest and comfortable attitudes about sexuality have been found to be the most significant variables in sex education program implementation (Yarber & McCabe, 1984).

Limitations on the ways, in which sexuality education is taught in New Jersey are not the result of a lack of teacher training and experience. Family Life educators tend to be experienced: They have taught family life education for an average of 10.4 years (and

a median of 9.7 years), with only 27% having taught for fewer than five years. Three quarter of the teachers felt very prepared to teach family life education. One reason is that they had received considerable training, with 86% in HIV/AIDS, and 78% in human sexuality; 53% had taken undergraduate courses in family life education, human sexuality 59%, while more than one-quarter had graduate training in each area (27% and 26% respectively). Half of the teachers had received in-district training on family life education (50%) and on HIV/AIDS (52%) and more than half had attended out of district workshops on family life education (65%), HIV/AIDS (72%) and human sexuality (52%). Only 61% had received training on human sexuality in the past three years, while 91% had received training on HIV/AIDS in that time; 72% had training on family life education over the past three years (Firestone, 1994).

Firestone (1994) reported that the more experienced teachers used a greater variety of instructional techniques. Instructors with more than 15 years experience were almost four times as likely as those with five or fewer years to use eight different techniques (19% vs. 5%). Some of these, like lectures, reflected old fashioned teacher-centered techniques, but others like demonstrations, values clarification and peer instruction, reflected the unconventional approaches recommended in research in this area. Teachers talk about responsible sexual behavior, which includes abstinence, only slightly more than they do about contraceptives. Yet these topics often represent real situations that students' face and are much more concrete than general decision making skills. Some topics such as contraception, condoms, and sexual expression without risk provide real options for reducing the risks for teenagers, who are likely to experiment with sexual behavior in spite of recommendations for abstinence.

Benefits of conducting a one-school study are many. Witte and Witte (1997) write "A population is any complete set of observation or potential observations; A real population is one in which all potential observations are accessible at the time of sampling (p.105)" The outcome of evaluating a 9-12th grade curriculum of this type should also prove worthy in determining the best method of delivering HIV/AIDS education to the youth.

Definition of Terms

1. Acquired Immunodeficiency Syndrome (AIDS): A fatal disease caused by the human immunodeficiency virus, a retrovirus that invades the body's immune system cells. These cells are the lymphocytes (t-4 cells) designed to fight infections. Deficiency of these cells can lead to the development of opportunistic infections and increased risk for all infection.
2. Center for Disease Control (CDC): The Center for Disease Control is located in Atlanta, Georgia and conducts surveys throughout the United States to provide much needed and necessary information in hopes to initiate change.
3. Department of Health, Education and Welfare (HEW): A branch of the government, which conducts studies, provides some grants and assistance to those in need.
4. Human Immunodeficiency Virus (HIV): The retrovirus that eventually leads to AIDS. This virus is contracted through sexual contact vaginal, anal or oral, without barrier protection, contaminated blood, needle sharing with an infected person, and breast milk.
5. New Jersey Youth Risk Behavior Survey (YRBS): An 84-item survey designed and supported by the Center for Disease Control and Prevention to provide information about the self-reported prevalence of behaviors,

which are highly related to the most important causes of illness and death among our youth and young adults.

6. School Health Education Profile Survey (SHEPS): An instrument provided to state education agencies by the CDC as a tool for monitoring statewide implementation of comprehensive school health education, including education to prevent HIV infection.
7. Sexually Transmitted Diseases (STD's): These are venereal diseases that are transmitted through sexual contact.
8. Special Needs Districts: Districts (30) which receive special state funding to provide the necessary additions to their district needed to enhance equity of services throughout the state.

The remaining chapters will include the following information: (a) Chapter 2 will be a review of the related literature, (b) Chapter 3 will describe the methodology in which the study will be conducted (c) Chapter 4 will discuss the analysis of the data discovered by completing the study, and (d) Chapter 5 will be summary, conclusions, and recommendations.

CHAPTER II

Review of Related Literature

This chapter reviews the literature pertinent to HIV/AIDS education and adolescents. It consists of four sections to include: (a) the history of HIV/AIDS health education, (b) background of New Jersey including code/statutes for HIV/AIDS health education, (c) curriculum development for HIV/AIDS, (d) literature including issues on adolescents' knowledge, attitudes, behaviors related to HIV/AIDS.

History of HIV/AIDS Health Education

Americans have long put their faith in education as a remedy for the many problems of society, and the question of how young people should manage their sexuality is not an exception to this generalization. Public support for sex education in the schools is both long standing and high (Page & Shapiro, 1992). Programs designed to teach school children about sex, reproduction, and related issues date back to the earliest part of this century (Mauldon & Luker, 1996).

Faced with the magnitude of these problems, our nation through its educational institutions has responded during different eras with prevention programs. As long ago as the early 1900s, there was concern that young people were having premarital sex and that the rates of "venereal diseases" (VD) were increasing. Believing that accurate information about VD would prevent youth from engaging in sex, some schools implemented VD education (Kirby et al., 1994).

However, many more schools began developing programs to address adolescent sexuality during the 1970s when adolescent sexual behavior, unintended pregnancy, STD's and their consequences were better measured and publicized (Kirby et al., 1994).

National attention began to focus on health education in 1971 when the President of the United States commissioned the President's Council on Health Education. The President's Committee on Health Education (1973) recommended that health problems that were influenced by behavior be identified and made the focus of health education programs. Further, the committee recommended that:

...Extended and intensified health education programs be developed for appropriate groups in every community to focus on health problems which apparently can be prevented, detected early or controlled through individual action. (p.137)

Interest in health education was heightened when two of the recommendations of the President's Committee on Health Education were implemented. In 1974, the Bureau of Health Education was created and placed within the Center for Disease Control in Atlanta, Georgia. Following reorganization of the Center for Disease Control in 1980, the U.S. Bureau of Health Education became the U.S. Center for Health Promotion and Education (Kolbe & Iverson, 1983).

During the period between 1972 and 1975, three other events had the effect of increasing the visibility and credibility of health education. First, the Fogarty International Center of the National Institutes of Health and The American College of Preventive Medicine, co-sponsored a series of task forces to examine the theory underlying disease prevention, health promotion efforts, and to identify program activities that had potential to prevent unnecessary disease and disability and to promote health. There series of reports was issued in 1975 at the National Conference on Preventive Medicine (Kolbe & Iverson, 1983).

Second, in 1974, the Department of Health, Education and Welfare (HEW) issued the Forward Plan for Health: 1976 to 1980. The Forward Plan emphasized the need for, and value of, preventive measures to be included within the national health strategy (Kolbe & Iverson, 1983).

The third event was the release in 1974 of the document, *A New Perspective on the Health of Canadians*. This document, commonly referred to as the LaLonde Report, had the effect of generating international interest in disease prevention and health promotion. The document stated the government (of Canada) had a legitimate and important role to assume in health promotion. Also important, the LaLonde Report introduced the concept of a health partnership between the government and the individual (Kolbe & Iverson, 1983).

In 1976, according to Kolbe and Iverson (1983), action in the health promotion arena shifted to the U.S. Congress with the passage of the Health Information and Health Promotion Act. This legislation authorized new appropriations for health promotion and created an office to coordinate federal health promotion programs. The office of Health Information and Health Promotion was placed within the Office of the Assistant Secretary for Health, thus creating a focal point for health education and health promotion at a policy level, to compliment programmatic activities already under way at the Center for Disease Control (CDC).

In December of 1977, a task force comprised of representatives from various Department of Health, Education and Welfare Agencies, convened to review and analyze departmental activities in disease prevention and health promotion. Federal disease prevention and health promotion goals, and the strategies to achieve them were later

identified in the landmark document, *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*. Released in July 1979, the central theme of this report was:

The health of this nation's citizens can be significantly improved through actions individuals can take themselves, and through actions decision makers in the public and private sectors can take to promote a safer and healthier environment for all Americans at home, at work and at play.

(Kolbe & Iverson, 1983, p. 295).

By the end of the 1980s, the Acquired Immunodeficiency Syndrome (AIDS) ranked as the sixth leading cause of death among adolescents in the United States having undergone a 100-fold increase in incidence from 1981 to 1987 (Hein, 1992).

According to the CDC (1990), by the end of September 1990, more than 147,000 cases of AIDS had been reported in the United States. Schools responded far more dramatically when AIDS became a prominent problem in the latter part of the 1980s. The advent of AIDS affected the willingness of some schools to cover certain topics, as well as the overall design of some programs (Kirby et al., 1994).

To control the spread of the AIDS virus, effective education programs are essential (Anderson, 1989). Since the release of the Surgeon General's report (1986), the need for education about AIDS and for AIDS prevention has received increased public attention. Education about the prevention of AIDS may be particularly important for adolescents because their typical exploratory behavior can include actions that potentially place them at risk for AIDS, such as having unprotected sexual intercourse with a number of different partners and experimenting with intravenous drugs. In addition, adolescents need accurate knowledge to make responsible, informed decisions about public policies concerning AIDS (Smith et al., 1993).

New Jersey Background

Sexuality education has been a controversial topic in New Jersey for at least 25 years. As early as 1967, the state board of education recommended that school districts have sexuality education curricula, but by 1979 only 40% of districts had coordinated programs. By that time, the commissioner of health had recommended that the state board take a stronger stand on sexuality education (Firestone, 1994).

The first version of a new regulation issued in 1979 required that a family life education curriculum be taught in every grade, from kindergarten on, and identified 20 specific topics to be covered by the end of eighth grade and another 13 to be covered before graduation of high school. These topics included plant and animal growth and reproduction, human reproduction, dating, child abuse and assault, and sexually transmitted diseases (STD's). The regulation also allowed parents to have their children excused from such instruction (Firestone, 1994).

According to Firestone (1994), neither the board nor the department of education was prepared for the intensity of backlash against the regulation. Conservative opponents of the bill were joined by major professional associations, who saw this as a first effort by the state to mandate local curricula. Opponents forced the state senate to review the new regulations; bowing to public pressure, that body eventually asked the board to revise them.

The final, very broad version of the state regulations that were adopted in 1980, declared that family life education means:

Instruction to develop an understanding of the physical, mental, emotional, social, economic, and psychological aspects of interpersonal relationships; the physiological, psychological and cultural foundations of human development, sexuality, and reproduction, at various stages of growth; the opportunity for pupils

to acquire knowledge which will support the development of responsible personal behavior, strengthen their own family life now...."(Firestone, 1994, p. 129)

Family life education was to be offered in elementary and secondary schools, but not at specific grades. Curricula had to be developed locally, with representation from the community. Although the code specified the types of certification that an instructor needed to teach family life education, it did not identify mandatory topics (Firestone, 1994).

Even so, the second mandate was also highly controversial. In 1981, an effort in the state assembly to "kill it" almost succeeded. In 1982, the mandate was challenged unsuccessfully in the state and federal courts. Legislative efforts continued with an unsuccessful direct attack in 1983. In 1988, opponents changed tactics and introduced a bill that would have required sexuality and AIDS education programs to stress abstinence as the only totally reliable means of preventing pregnancy and the spread of AIDS. Although this effort was unsuccessful, the same bill was reintroduced in 1993, along with a separate bill to prohibit the distribution of condoms in New Jersey's schools. The "stress abstinence" bill passed both houses of the state legislature and was stopped only by a gubernatorial veto (which was narrowly sustained). Since then, conservative legislators have introduced additional bills intended to undermine the provision of sexuality education in New Jersey (Firestone, 1994).

Current state regulations in effect since 1990 require HIV prevention education as part of a coordinated sequential elementary and secondary curriculum of comprehensive health education, but do not specify grade levels or curriculum content. In October 1994, the State Board of Education issued a public statement which directed the department to

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do not limit district flexibility in adopting a curriculum appropriate for its community. (New Jersey Department of Education, 1998).

The New Jersey Department of Education designed a booklet to assist school districts in reviewing their policies and procedures related to HIV for conformance with regulations of New Jersey State Board of Education. These regulations were modified in 1992 and readopted without change in 1996. The title of this booklet is "HIV Policy and Practice." The HIV Policy and Practice (1996) states the following information contained in subchapter 4. Comprehensive health education relates to this document; NJSA.6:29-4.1 general requirements:

(a) District boards of education shall provide for the development of a comprehensive health education program through a coordinated sequential elementary and secondary curriculum with instructional units appropriate to the age, growth and development and maturity of the pupils.

(b) Comprehensive health education means health education in a school setting that is planned and carried out with the purpose of maintaining, reinforcing, or enhancing the health, health-related knowledge, skills, and health attitudes and practices of children and youth that are conducive to their good health and that promote wellness, health maintenance, and disease prevention.

(c) Comprehensive health education includes but is not limited to instruction in personal health and hygiene, growth and development, dental health, mental and emotional health, accident prevention and safety, consumer health, community/environmental health, family life education, substance abuse

(including alcohol and tobacco), disease prevention and control and human immunodeficiency virus (HIV) infection.

(d) District boards of education shall provide instruction for drug and alcohol education in accordance with the curriculum and instruction provisions cited in N.J.A.C. 6:29-6.6.

(e) HIV prevention education shall be conducted as follows:

1. Each district board of education shall develop an HIV prevention education program.

i. The HIV prevention education curriculum shall be developed through appropriate consultation and participation of teachers, school administrators, parents and guardians, students, physicians, members of the clergy and representative members of the community. The district board of education shall demonstrate prior to the initiation of any education program that such consultation and participation have taken place. The process of consultation shall be continued as the program is revised in future years. Upon request of parents and guardians, the curriculum shall be made available for their review.

2. The district board of education shall provide for in-service education to those teachers responsible for HIV prevention education.

3. The State Department of Education shall provide training assistance and instructional guides to district boards of education in the development of HIV prevention education programs.

4. The district board of education shall establish procedures whereby any pupil, whose parent or guardian presents to the school principal a

signed statement that any part of the instruction of HIV prevention education is in conflict with his or her conscience, or sincerely held moral or religious beliefs, shall be excused from that portion of the course where such instruction is being given and no penalties as to credit or graduation shall result therefrom. (NJSA 18A:35-4.6 et seq. pp. 7-8).

In order to be effective, the HIV prevention education curriculum should not only provide accurate age-appropriate information and skills but also address HIV issues which are relevant in the community served by the school and help reinforce community norms against HIV risk behaviors. The advisory group provides the school with information regarding community needs, norms, and expectations for the curriculum. School districts, which will provide for community input into curriculum development and revision, generally also gain broader community support (Freudenberg, N., & Radosh, A. 1998).

New Jersey regulations prohibit separate courses of instruction for boys and girls. However, portions of classes that deal exclusively with human sexuality may be conducted in separate sessions for boy and girls, provided the course content is the same. (New Jersey Department of Education, 1994).

In the 6:29-4.2 statute titled Family Life Education, HIV/AIDS is not mentioned.

The latest development from the New Jersey State Department of Education are the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education (1998). These Core Curriculum Standards for Comprehensive Health and Physical Education intend to encourage students to take responsibility for their own

lives by acting conscientiously in the present and by establishing positive health practices that will support and enhance lifelong wellness.

The standards for comprehensive health and physical education emphasize those health problems most identified in research. Studies indicate six primary causes of our major health problems:

1. Behaviors that cause intentional and unintentional injuries
2. Drug and alcohol abuse
3. Tobacco use
4. Sexual behaviors that lead to sexually transmitted diseases, including HIV infection, and unintended pregnancy
5. Inadequate physical activity
6. Dietary patterns that cause disease

The list of standards for Comprehensive Health and Physical Education are as follows:

- 2.1 All students will learn health promotion and disease prevention concepts and health-enhancing behaviors.
- 2.2 All students will learn health-enhancing personal, interpersonal, and life skills.
- 2.3 All students will learn the physical, mental, emotional, and social effects of the use and abuse of alcohol, tobacco, and other drugs.
- 2.4 All students will learn the biological, social, cultural, and psychological aspects of human sexuality and family life.
- 2.5 All students will learn and apply movement concepts and skills that foster participation in physical activities throughout life.
- 2.6 All students will learn and apply health-related fitness concepts. (New Jersey State Department of Education, 1998.)

Following is a discussion on the standards which pertain to this document.

Although HIV/AIDS is not mentioned in standards 2.1 and 2.2, each discusses points which can be related to HIV/AIDS education.

Standard 2.1 All Students Will Learn Health Promotion and Disease Prevention Concepts and Health-Enhancing Behaviors

Descriptive Statement: Health-literate and physically educated students seek to improve personal, family, and public health. Using health promotion and disease prevention principles, nutritional concepts, and injury prevention strategies, students modify personal behaviors based on risk factors and adopt health practices to reduce or eliminate preventable health problems. Health-literate and physically educated students recognize the importance of prevention, early detection, and treatment in enhancing personal wellness.

Cumulative Progress Indicators by the end of Grade 4, students:

1. Describe a healthy child and identify factors that contribute to good health.
2. Describe the basic structure and function of human body systems.
3. Identify and demonstrate responsible health behaviors for children.
4. Explain how childhood injuries and illnesses can be prevented and treated.
5. Describe potentially dangerous or threatening situations related to childhood activities, develop personal protection strategies, and cite resources for help.
6. Identify common health products and foods found in the home and correctly interpret labels, information, directions and warnings.

Building upon knowledge and skills gained in the preceding grades, by the end of Grade 8, students:

7. Describe a healthy adolescent, discuss injuries and illnesses common to this age group, and identify ways to prevent, reduce, or eliminate these health problems.
8. Explain how health is influenced by the interaction of body systems and nutritional intake.
9. Analyze how family, peers, culture, media, technology and the environment affect wellness.
10. Identify and demonstrate health practices that support and enhance personal and family physical and mental health.
11. Analyze a health profile to determine strengths and potential health risks resulting from risk factors and health-enhancing behaviors.
12. Describe situations requiring health services and locate community health care providers, comparing their services, benefits, and costs.
13. Examine health product and food labels and advertisements, comparing accuracy, content, directions and value.
14. Analyze the influence of peers and the media on risk behaviors, injuries and violent behavior.

Building upon knowledge and skills gained in the preceding grades, by the end of Grade 12, students:

15. Describe a healthy adult, discuss adult physical and mental health problems, and use health assessment data to develop strategies for reducing health problems and related risk factors.

16. Analyze the impact of genetic, nutritional, behavioral, cultural, and environmental factors on the functioning of body systems and use this information to identify responsible health practices.

17. Analyze situations that require professional health services, analyze the costs and sources of payment, and discuss how these factors influence the accessibility and delivery of health care.

18. Discuss and compare the influence of public health policy, government regulations, research, medical advances, and the health care industry on current and emerging health care.

19. Describe the principles of injury prevention and risk management, analyze factors that contribute to the incidence of injuries and violence, and develop strategies for prevention.

20. Analyze the influence of the media on risk behaviors, disease prevention, and the incidence of injuries and violent behavior.

Standard 2.2 All Students Will Learn Health-Enhancing Personal, Interpersonal, and Life Skills

Descriptive Statement: Health-literate and physically educated students communicate effectively. These students set health goals, solve health-related problems, and resolve conflicts. They use health-enhancing personal, interpersonal, and life skills to initiate and maintain healthy relationships that contribute to wellness.

Cumulative Progress Indicators by the end of Grade 4, students:

1. Describe and demonstrate a variety of ways to access and convey health information and duties.

2. Demonstrate decision-making and refusal skills in situations affecting health and safety.

3. Define health goals, differentiate between long and short term goals, and set a personal health goal to track progress.

4. Define conflict and demonstrate appropriate nonviolent strategies to resolve it.

5. Describe how culture and the media affect the ways individuals communicate, show emotions, and cope with stress.

Building upon knowledge and skills gained in the preceding grades, by the end of Grade 8, students:

6. Describe and demonstrate ways to access and present health information and ideas, and analyze the information for accuracy and reliability.

7. Describe and demonstrate effective communication skills, decision-making skills, refusal skills, negotiation skills and assertiveness in situations that influence adolescent health and safety.

8. Analyze how health decisions and behaviors are influenced by family peers, culture, and the media, and develop strategies that support effective decision-making and safe behavior.

9. Describe how health goals are influenced by changes that occur throughout the life cycle.

10. Analyze the causes of conflict and violent behavior in youth and adults, and describe nonviolent strategies for individuals and groups to prevent and resolve conflict.

11. Describe the impact of crisis, stress, rejection, separation, and loss and develop coping strategies.

Building upon knowledge and skills gained in the preceding grades, by the end of Grade 12, students:

12. Synthesize, interpret, and express information about health issues using valid resources, and adapt the information for different audiences.

13. Analyze social situations and conditions that affect health and safety, and select and evaluate the appropriate skills for each situation.

14. Analyze the causes of conflict in groups, families and within the community, and demonstrate and evaluate nonviolent strategies to prevent, mediate, and resolve conflict.

15. Analyze the impact of crisis, stress, rejection, separation, and loss on physical and emotional health, and develop coping strategies that consider the influence of family, culture, and personal experiences.

16. Develop a plan for lifelong wellness using data from health assessments, family history, nutritional information, and current health practices, and evaluate progress towards meeting health goals in the plan.

17. Predict adult daily needs to maintain a healthy lifestyle, design a plan and budget based on those needs, and justify the plan.

Standard 2.4 All Students Will Learn The Biological, Social, Cultural, and Psychological Aspects of Human Sexuality and Family Life

Descriptive Statement: Health-literate and physically educated students consider the biological, social, psychological, and cultural implications of sexual behavior when making health enhancing choices. Health literate and physically educated individuals take personal responsibility for their sexual health and the health of their relationships, and recognize the impact that sexual decisions may have on the well-being of others.

Cumulative Progress Indicators by the end of Grade 4, students:

1. Identify the stages of human development from conception to death.
2. Identify ways to show affection and caring that are appropriate for children.
3. Discuss how family and friends are important throughout life and that relationships require respect for others.

4. Explain different kinds of families and that all family members have rights, privileges, and responsibilities.

5. Discuss the influence of the media on the development of gender stereotypes.

Building upon knowledge and skills gained in the preceding grades, by the end of Grade 8, students:

6. Describe the significant developmental milestones of each stage of human development, with emphasis on the physical, emotional, and social changes of adolescence.

7. Describe the functioning of the human reproductive system and the physical and emotional changes that occur at puberty.

8. Describe and discuss affection, love, commitment, and sexual attraction, and the difference between having sexual feelings and acting on them.

9. Discuss factors that support and sustain relationships such as friendships and marriage.

10. Describe the responsibilities of parenthood, with an emphasis on teen parenthood, and discuss the impact of parenthood on parents, family members and the child.

11. Discuss the impact of early sexual activity on physical, emotional, and social health.

12. Develop strategies to support sexual abstinence, and compare and contrast methods of contraception used to reduce risk of sexually transmitted diseases, HIV and unintended pregnancy.

13. Analyze sexual messages, images, and stereotypes presented in the media and discuss their impact on sexual behavior.

Building upon knowledge and skills gained in the preceding grades, by the end of Grade 12, students:

14. Discuss theoretical models of human personality development.
15. Describe the physical, emotional, and social changes that occur at each stage of human development, and the role of human sexuality throughout the life cycle.
16. Describe how personal relationships evolve over time, focusing on changes in friendships, family, dating relationships, and marriage.
17. Analyze the responsibilities, joys, demands, and challenges of parenthood.
18. Describe safe and effective parenting skills, and identify resources for information and help with parenting.
19. Discuss issues regarding sexual orientation, sexual harassment, sexual assault, and domestic violence.
20. Compare and contrast risk reduction and prevention strategies, including sexual abstinence, monogamy, and methods of contraception.
21. Identify resources that provide information, assistance and care in addressing sexual and reproductive health and legal issues.

Curriculum Development for HIV/AIDS

According to the CDC as of June 30, 1998, New Jersey ranks 5th in the United States with 37,342 reported AIDS cases. New Jersey needs to be swift with saving our youth with education (New Jersey HIV/AIDS Quarterly, 1998).

Kirby (1997) researched five types of programs. Education programs, which include only programs that focus on the importance of abstinence from sexual intercourse, typically until marriage. Either these programs do not discuss contraception or they briefly discuss the failure of contraceptives to provide complete protection against pregnancy and STD's. To date, six studies of abstinence-only programs have been published. None of these studies have found consistent and significant program effects on delaying the onset of intercourse, and at least one study provided strong evidence that the program did not delay the onset of intercourse. Thus, the weight of the current

evidence indicates that these abstinence programs do not delay the onset of intercourse. On the other hand, this evidence is not conclusive because all but one of these evaluations had significant methodological limitations that could have obscured program impact. For example, two studies measured the impact of the program for only six weeks post-intervention, which was too short a time to measure a significant change in behavior in either the program or control groups.

Also included in education programs and sexuality education are STD/HIV prevention programs. These programs discuss not only abstinence but also condoms and other methods of contraception as ways of protecting against pregnancy or STD's. They range from sexuality or AIDS education programs taught during regular school classes, to programs taught in schools after hours, to programs taught in various community settings (Kirby, 1997).

There has been some concern that such programs will actually encourage teenagers to become sexually active. However, evaluations of these programs strongly support the conclusion that sexuality and HIV education curricula do not increase sexual intercourse, either by hastening the onset of intercourse, increasing the frequency of intercourse, or increasing the number of sexual partners. To the contrary, some of these programs delayed the onset of intercourse, reduced the frequency of intercourse, or reduced the number of sexual partners. Kirby and Brown, (1996) suggest that some of the programs increased condom use or contraceptive use more generally. Taken together, these results are positive, indicating that some sexuality and HIV education programs can significantly delay sexual activity or increase contraceptive use. A caveat is in order however. Only two of the studies of sexuality education and HIV education programs included random assignment, large sample sizes, long-term follow-up, measurement of behavior, and proper statistical analyses and neither of these well designed studies found significant effects upon behavior (Kirby, 1997).

A disproportionate number of the programs that significantly increased contraceptive use, were AIDS education programs that increased condom use. It cannot yet be determined, whether AIDS education programs are inherently more effective than sex education programs that cover pregnancy, STD's, HIV, and other topics, or whether AIDS education programs have simply been better funded, had better trained staff, had studies with larger sample sizes, or had some other advantage that improved measured effectiveness. For instance, the fear of AIDS may generate greater receptivity to information about prevention than the fear of pregnancy (Dusenbury & Falco, 1995).

Those programs that show modest behavioral effects share nine important characteristics many of which, interestingly enough, are similar to those characteristics of programs effective at reducing substance abuse (Dusenbury & Falco, 1995). These programs:

1. Focus clearly on reducing one or more sexual behaviors that lead to unintended pregnancy or HIV/STD infection.
2. Incorporate behavioral goals, teaching methods, and materials that are appropriate to the age, sexual experience, and culture of the students.
3. Are based upon theoretical approaches that have been demonstrated to be effective in influencing other health-related risky behaviors.
4. Last long enough to allow participants to complete important activities.
5. Provide basic, accurate information about the risks of unprotected intercourse and methods of avoiding unprotected intercourse.
6. Employ a variety of teaching methods designed to involve the participants and have them personalize the information.
7. Include activities that address social pressures related to sex.
8. Provide models of and practice in communication, negotiation, and refusal skills.

9. Select teachers or peers who believe in the program and then provide them with training, which often includes practice sessions.

Although programs that have shown some positive effects on behavior share many of these characteristics, little evidence exists regarding which of these factors or combinations of factors contribute most to the overall success of the programs (Henshaw and Torres, 1994).

Other types of programs are designed to improve access to contraception and include family planning services in family planning clinics and other health settings, school-based health centers, and condom availability programs located in schools (Henshaw and Torres, 1994).

Family Planning Services

Family planning clinics or family planning services within other health settings provide contraception and other reproductive health services and teach patients the knowledge and skills to use contraception. According to SEICUS (1992), an estimated 2.8 million 15-19 year old females (or nearly one-third of all females in that age group) made one or more visits to a clinic, private medical source, or counselor for family planning in a single year. The previous information means that almost two-thirds of 15-19 year olds visited clinics. Many of the young women receiving family planning services obtained contraceptives, especially oral contraceptives, which are more effective in preventing pregnancy than condoms or other non-prescription contraceptives. Given the greater effectiveness of the contraceptive methods typically provided by family planning services, and given the other services provided in these settings, family planning services presumably prevented many adolescent pregnancies that would have occurred if these services had not existed or had been significantly curtailed. On the other hand, there is remarkable little research evidence to support this conclusion (Firestone, 1994).

While there have been several studies on the effects of family planning clinics upon pregnancy or birth rates, and while four of these studies suggest that subsidized family planning clinics may have reduced adolescent birth rates, the strength of any conclusion is greatly weakened by conflicting results among studies and by several severe methodological limitations (Alan Guttmacher Institute, 1994).

Another important question remains: How can family planning services be improved so that adolescents engage in less unprotected sex? Only a few studies have examined this question, and their results are inconclusive. However, they suggest that teens were more likely to attend family planning clinics when barriers to clinic services were reduced (Kirby, 1997).

Alcohol-Based Health Centers and Condom-Availability Programs

School-based health centers provide affordable primary health care services to students who otherwise might not have ongoing access to such services. Some also dispense contraceptives, either devices themselves or prescriptions to be filled elsewhere. When school-based clinics are well-staffed and well-run and also dispense contraceptives, they have many of the characteristics of ideal reproductive health programs (i. e. their location is convenient to the students, they reach both females and males, they provide comprehensive health services, they are confidential, their staff are selected and trained to work with adolescents, they can easily conduct follow-up, their services are free, and they can integrate education, counseling, and medical services). On the other hand, they typically do not reach out-of-school teenagers (e.g., those who have graduated from or dropped out of high school), nor do they reach the older males who often father the children born to teenaged girls (Kirby, Waszak, & Ziegler, 1991).

In schools with health centers providing contraceptives, substantial proportions of sexually experienced students do obtain contraceptives from the health centers. However, given the relatively wide availability of condoms and contraceptives in most

communities, providing contraceptives does not appear to hasten or increase the frequency of teen sexual activity school-wide, nor does it appear to markedly increase the school-wide use of condoms or contraceptives. Many students simply obtain their contraceptives through the health center instead of somewhere else. In addition, the provision of contraceptives does not appear to decrease school-wide pregnancy or birth rates (Morton, Nelson, Walsh, Zimmerman, & Coe, 1996).

Schools without such health centers can also be involved in reducing sexual risk-taking behavior. For example, given the threat of AIDS, other STD's, and pregnancy, more than 300 schools without school-based clinics have begun making condoms available through school counselors, nurses, teachers, vending machines, or baskets. These schools are in addition to about 100 schools that make condoms available to students through school-based clinics (Morton et al., 1996).

In some schools that make condoms available, students obtain substantial numbers of condoms from the schools, but in other schools they do not. Again, there is some substitution effect - students would have obtained some of those condoms from other sources if the school had not provided them. The studies consistently show that making condoms available does not increase any measure of sexual activity, but they have produced inconsistent results on the impact of school condom-availability upon actual condom use (Morton et al., 1996).

Educational Programs

The third type of program is to conduct educational programs for parents and their families. To help ease the problems many parents and children have discussing sexual topics, many brief educational programs have been designed to increase parent/child communication. These include programs for parents only, programs for parents and their children together, homework assignments in sex education classes requiring

communication with parents, and video programs with written materials to be completed at home (Kirby, 1997).

With remarkable consistency, studies indicate that over the short term these programs do increase parent/child communication about sexuality, as well as parents' and children's comfort with that kind of communication. However, these positive effects appear to dissipate with time. Furthermore, there does not exist a simple relationship between parent/child communication and adolescent sexual and contraceptive behavior, and there is little evidence that these programs affect such behavior (Kirby, 1997).

Multi-Component Prevention Program

A group of studies has measured the impact of programs with two or more of the following distinct components: (a) classroom instruction, (b) school wide activities, (c) provision of contraception, and (d) media campaigns. The most intensive program evaluated was designed to reduce teen pregnancy in a small, rural community in the South. The program included the following components: (a) Teachers, administrators, and community leaders were given training in sexuality education; (b) sex education was integrated into all grades in the schools; peer counselors were trained; (d) the school nurse counseled students, provided male students with condoms, and took female students to a nearby family planning clinic; and (e) local media, churches, and other community organizations highlighted special events and reinforced the messages of avoiding unintended teenage pregnancy. After the program was implemented, the pregnancy rate for 14-17 year olds declined significantly for several years. After parts of the program ended (e. g. the school nurse resigned, linkages to contraceptive services were terminated, and some teachers left the school) the pregnancy rate returned to pre-program levels (Jorgensen, Polles, & Camp, 1993).

Although the multi-component programs reviewed in the full report differ along a number of dimensions, their evaluations suggest the following tentative conclusions: (a)

making condoms or contraceptives available to youths does not hasten or increase sexual activity; (b) some multi-component programs reduced sexual risk-taking or teen pregnancy rates while others did not, indicating that simply having multiple components does not ensure success; (c) the most effective programs appear to be those that were most intensive-however, their success may also have been affected by the characteristics of both the target population and the environment; and (d) programs must be maintained if they are to continue to have an effect. In two cases, after the programs ended, some of the positive changes (i. e. an increase in the use of condoms or a decrease in teen pregnancy rates) returned to pre-program levels (Kirby, 1997).

Youth Development Programs

Several trends suggest that improving young women's education and life options reduce their pregnancies and birth rates. In many countries, as young women's educational levels and employment opportunities have increased, their fertility rates have declined. In this country, between the mid-1950s and the mid-1970s, increasingly large percentages of young women postponed marriage and childbearing and pursued higher education and more challenging professional careers. During these years, the teen pregnancy rate declined markedly (Alan Guttmacher Institute, 1994). Among today's adolescents, there remains a strong relationship between educational and career plans and adolescent pregnancy (Miller & Moore 1995). Observing these trends, some professionals working with youths believe that one of the most promising approaches to reducing teen pregnancy is to improve educational and career opportunities for youths, as well as creating a belief for themselves in their own families.

The youth development programs reviewed in the full report are designed to improve life skills or life options, rather than focus primarily upon sexual issues or pregnancy prevention. One of the most extensively evaluated programs is the Teen Outreach Program (TOP) for middle school and high school youth. It included two major

components: (a) weekly classroom discussions of such topics as students understanding themselves and their values, decision-making skills, communication skills, human growth and development, parenting, family relationships, life options, community resources, and volunteer experiences, and (b) volunteer service in the participants' schools or communities (Allen, Philliber, & Hoggson, 1990). Although there are important limitations of the evaluation studies, they consistently suggest that the program reduced pregnancy rates during the year in which the youths participated. Several possible reasons have been suggested for these positive results: (a) the participants developed on-going relationships with caring program facilitators, (b) both supervision and alternative activities reduced the opportunity for participants to engage in problem behaviors, and (c) the volunteer experiences provided opportunities and encouraged the young people to think about their futures.

By contrast, another major youth development initiative, with one of the strongest evaluation designs, did not appear to reduce adolescent sexual risk-taking behavior or pregnancy, even though it included components focusing upon sexuality. More research is needed to determine which components of youth development programs are most critical to reducing pregnancy rates (Kirby, 1997).

The experiences of developing countries, the experience of the United States during the mid-1950s to the mid-1970s, and the results from a small number of evaluations of youth development programs all suggest that programs that focus upon education, employment, and life options for young people may reduce adolescent pregnancy rates. The promising approach should be explored more fully (Kirby, 1997).

Curriculum

The Sex Educational and Information Council of the United States (SEICUS, 1992) reports:

[New Jersey, which has a state policy requiring HIV/AIDS education, utilizes a 'stand alone' comprehensive HIV/AIDS curriculum which is developmentally- appropriate with an appropriate placement of topics sequenced K-12. This curriculum represents a thorough skills-building approach designed to help young people exercise responsibility and incorporate prevention behaviors regarding sexual relationships. It sufficiently covers the three learning domains, providing thorough information and learning opportunities for each.] (pp. 33-35)

Curriculum topic areas thoroughly covered include: (a) The history, incidence, and nature of HIV/AIDS infection, transmission and prevention; safer sex; (b) HIV testing; (c) individual risk-taking behaviors; (d) the range of sexual risk behaviors; (e) compassion for persons with HIV and /or AIDS; and (f) self-esteem (SEICUS, 1992).

Highlights include: (a) A balanced approach to abstinence and condom use information; (b) abstinence from sexual behaviors and drugs, long-term sexual fidelity within or prior to marriage, condom use are approached within equal importance and thoroughness; (c) extensive safer sex information with emphasis on condom use, including the practical issues of using, disposing and purchasing condoms; (d) sexual risk assessment with emphasis on low risk, non-coital behaviors and on the ability to discriminate between healthy and harmful sexual behaviors; and (e) a thorough skill-building approach that includes learning opportunities for evaluating risky behaviors, assertiveness, decision-making, communicating, negotiating about sexual decisions, sexual limit-setting, and resisting negative peer pressure (SEICUS, 1992).

The curriculum represents an excellent integration of HIV/AIDS education within the sexually transmitted diseases component of health education, including information on medical treatment for persons with HIV and/or AIDS. It provides an accurate and positive approach to sexuality issues and to sexual orientation, and focuses on respect for people of different sexual values and orientation (SEICUS, 1992).

There are several characteristics, which may be linked to their success. These characteristics were first published by a panel of experts selected by the Center for Disease Control and updated by (Kirby et al., 1994). The nine characteristics that effective curriculum programs share include:

1. Effective programs focused clearly on reducing one or more sexual behaviors that lead to unintended pregnancy or HIV/STD infection.
2. The behavioral goals, teaching methods, and materials were appropriate to the age, sexual experience, and culture of the students.
3. Effective programs were based upon theoretical approaches that have been demonstrated to be effective in influencing other health-related risky behaviors.
4. Effective programs lasted a sufficient length of time to complete important activities adequately.
5. Effective programs employed a variety of teaching methods designed to involve the participants and have them personalize the information.
6. Effective programs provided basic, accurate information about the risks of unprotected intercourse and methods of avoiding unprotected intercourse.
7. Effective programs included activities that address social pressures on sexual behaviors.
8. Effective programs provided modeling and practice of communication, negotiation, and refusal skills.

9. Effective programs selected teachers or peers who believed in the program they were implementing and then provided training for those individuals. (p. 343)

Freudenberg and Radosh (1998) state that the goal of an HIV prevention program is to create a comprehensive program that provides a full range of related services. These related services include: (a) classroom instruction on HIV, (b) peer education, (c) special events, (d) condom availability, (e) parent activities, (f) counseling, (g) referrals on HIV related issues.

At the end of the SEICUS Report (1992), the only inadequacy that appears is in a chart, which is posting teacher certification/preparation. In New Jersey, a teacher need not be certified to teach sex education and the preparation was deemed as adequate by SEICUS. SEICUS also noted other weaknesses including: (a) Lack of instruction about sexual responsibility and decision making and failure to discuss human sexuality in a positive framework; (b) inadequate instruction on condom use; (c) overemphasis on abstinence that resulted in no discussion of safe sex practices; and (d) absence of discussion about sexual orientation. In addition, not all localities are in compliance with state mandates (Britton, DeMauro & Gambrell, 1992).

A review of sex education curriculums supporting only abstinence was conducted. Berne and Huberman (1996) state:

In 1981, the American Family Life Act was passed, creating Title XX funds. The intent was to establish a variety of abstinence-based sexuality education programs and to test their results in delaying sexual intercourse among teens. In five studies of three major abstinence until marriage programs, students who had taken part in the program one or two years earlier showed no significant gains in maintenance

of abstinence over a control group not exposed to a program. The three programs investigated were Sex Respect, Success Express and an Alternative National Curriculum on Responsibility (AANCHOR). (p. 229)

Christopher and Roosa (1990) explain there may be an inherent insensitivity in programs that stress abstinence as the only alternative to adolescent pregnancy. This approach ignores students who have already experienced sexual intercourse, especially those who may have experienced coitus involuntarily, as in the case of rape or incest. Those who have experienced voluntary intercourse may be turned off by a message that suggests they have done something bad or wrong; those whose experience was involuntary may find abstinence only programs particularly upsetting.

Christopher and Roosa, (1990) discuss that encouragement of abstinence should not be dropped as a goal and forgotten. All programs should encourage abstinence, but also offer an alternative for those who are already sexually active or choose to become sexually active.

Berne and Huberman (1996) found the following information about abstinence-plus curriculum. They stated the abstinence-plus curriculum with skills development, followed by lessons about contraception do not give students "mixed messages" or encourage sexual behaviors longer than the control group. Among the successful programs were the following: (a) Becoming a Responsible Teen; (b) Reducing the Risk, Be Proud! Be Responsible!; and (c) Get Real About AIDS. Two curriculums, Sex Respect and Teen AID have been described as having both benefits, and drawbacks as both programs are involved in litigation in several states because their research methods were flawed.

Reports from the National Academy of Sciences (1986) and the Office of the Surgeon General (1986) support the need for widespread AIDS education.

Cultural Relevance

Yep (1994) describes how curriculum development should create a sense of ownership in the community. This can be established through community involvement in the actual development of the curriculum. Peer educators can also assist in the identification of needs and effective strategies to target such community. Hopefully this will lead to the development of a community-sensitive curriculum.

For example, culturally appropriate strategies targeted to the Asian/Pacific Islander, need to be practical, non-threatening, and tailored to the clientele's lifestyle. Instead of the standard brochure, the audience should be given practical and portable items such as key chains, note cards, and matchbooks. Thus, the receiver is more likely to see the message on a continuing basis. Educational efforts should be geared toward providing materials that are culturally sensitive and accessible. The Fortune Cookie and the Chinese Red Envelope, which is traditionally celebrated at New Years to give money, are examples of culturally sensitive and accessible materials. That can be incorporated into the curriculum as effective instructional materials and also be considered successful because there is humor, discretion, and each is cost effective (Yep, 1994).

To change attitudes toward a certain behavior, one must identify the behavioral and normative beliefs that are salient in a population prior to developing a change campaign. These beliefs need to be taken into consideration when developing HIV education courses. The effectiveness of an HIV educational course cannot be tested on one population and then broadened for use with other groups. Behavioral and normative

beliefs must be appropriately addressed for each group that is reached (Damond, Breuwer, & Pharr, 1993).

Damond et al. (1993) reports that a culturally specific course has two vital components: (a) the educational approach (e. g. curriculum, communication style, type of exercises) and (b) the educational setting (e. g. characteristics of the instructor, location, and other participants).

Comprehensive School Board Planning

Several programs that were not solely educational but closely linked to an educational component with clinic services apparently did increase the use of contraception (Zabin, Street, & Hardy, 1983; Brann et al., 1975; Dickens, Mudd, & Huggin, 1975). Since the first school-based health clinic opened in a Dallas high school in 1970, such clinics have been seen not only as a means of providing basic health care to medically underserved teenagers, but as a promising way of addressing some of the intractable problems, particularly unintended pregnancy, that face young people (Kirby, Waszak, & Ziegler, 1991). Currently, there are more than 178 school-based clinics operating in middle, junior, and senior high schools in 32 states. They may be found in most major cities and many rural areas (Hyche-Williams & Waszak, 1990).

The school-based program offers comprehensive medical and educational services to adolescents in the school building. It combines sexuality education, prenatal care, day care services for students' small children, and primary adolescent medical services ranging from athletic physicals to family planning counseling and contraceptive follow-up. In the regular classrooms, clinic staff covers some of the topics in sexuality education; in the clinic, they meet with students individually. If students are considering having sex, the staff encourages abstinence. If the students are having sex, the staff

provides information and counseling on different methods, conducts gynecological exams for females, makes referrals to hospital teen program for prescriptions, and provides follow-up including check-ups in the high school clinic (Kirby, 1992).

Kirby and Brown (1996) found of all school and program characteristics measured making condoms available in baskets or bowls was the single most important characteristic. Having a school clinic was the second most important characteristic that increased condom use. Overall, school based programs are more likely to effect students who are not sexually active at the start of the program (Levy et al., 1995).

Kirby (1992) suggests that it is not prudent to generalize from selective sexuality education programs to all sexuality programs because programs vary in different curricula, staff, and goals. However, the evaluation of the programs presented in Kirby's study indicated the kinds of effects that programs can have if they have similar goals, curricula and teachers.

Adolescents' Knowledge, Attitudes, Behaviors Related to HIV/AIDS

A plethora of recent studies have been conducted on HIV/AIDS-related knowledge, attitudes, and behaviors of children and adolescents. This information should help readers to decide whether HIV/AIDS curricula are developmentally appropriate and, in turn, facilitate the presentation of stimulating and enlightening HIV-related information to students (Ford & Russo, 1997).

A preponderance of evidence suggests that children develop increasing levels of HIV/AIDS knowledge with age and ascending grade levels. However, a mediating variable of HIV/AIDS knowledge acquisition is a child's or adolescent's cognitive developmental level (Ford & Russo, 1997). The following two studies assessed the

content and accuracy of children's AIDS-related knowledge in addition to their developmental reasoning stage.

An investigation of both the complexity of reasoning and accuracy of content beliefs about AIDS among first, third, and fifth grade children found that the complexity and accuracy of children's beliefs increased with successive grade levels. The participants in this study were classified into their groups based on their presumed level of complexity of reasoning and accurate and inaccurate beliefs about AIDS transmission. Because complexity of reasoning did not significantly differentiate the theory groups, it bolstered the assumption by the authors that the accurate content of children's belief about AIDS is a result of their exposure to and comprehension of AIDS information versus their cognitive maturity. The conclusions in this study support the necessity and importance of ongoing AIDS education for elementary school-age students, as well as for older children who may harbor misconceptions (Ford & Russo, 1997).

Intuitive theories of HIV causality in a sample of children and adolescents were investigated (Sigelman, Estrada, Perenowski, & Woods, 1996). Results indicated that, with increasing age, participants endorsed true risk factors and rejected false risk factors. Age was the strongest prediction of both general knowledge and intuitive theory type in this study.

Studies conducted with only adolescent participants suggest that adolescents' general knowledge of HIV/AIDS has increased over the course of the epidemic. However, knowledge beyond common HIV transmission routes such as unprotected sexual intercourse and the sharing of needles with an infected individual is less common, including knowledge about the immune system, condom use, and the value of HIV

testing. Although educational interventions have been successful in dispelling casual contact misconceptions, as many as one third of teenagers continue to believe misconceptions about the risk of contracting HIV from donating blood, venipuncture, and mosquito bites. This finding further supports the need for extensive AIDS education for youth of all ages (Ford & Russo, 1997).

The New Jersey Youth Risk Behavior Survey (YRBS) was conducted in May of 1995 (New Jersey Department of Education). The YRBS is an 84-item survey designed and supported by the Center for Disease Control and Prevention. Included is information about sexual behaviors resulting in HIV infection, sexually transmitted diseases, and unintended pregnancies. Thirty-seven high schools, chosen at random from grades nine through twelve, agreed to participate in the survey. The school response rate was 80% and the student response rate was 81%. The results of the survey pertaining to HIV/AIDS are as follows: (a) 94% of students reported being taught about HIV/AIDS in school; (b) rates of education about HIV/AIDS varied by student age and ethnicity (c) regardless of age, 9 of 10 students, 15 or younger (96%), 16 to 17 years old (94%) or ages 18 and over (92%) had learned about AIDS in school; (d) white students (96%) were slightly more likely than Black (92%), Hispanic (92%), or students of other ethnic origins (91%) to have been taught about AIDS in school.

Fewer students had discussed HIV/AIDS with their parents. However, almost two-thirds of students (65%) reported having had a discussion with their parents about AIDS at some point in time. Ninth graders (61%) were less likely to have discussed AIDS with their parents than students in other grades (66% to 70%). The number of students who had discussed HIV/AIDS with their parents varied by gender and ethnicity.

Female students (70%) were more likely than their male classmates (61%) to have discussed HIV/AIDS with their parents. Black (71%) and Hispanic (71%) students were more likely than White (66%) students to have talked about HIV/AIDS with their parents. Fewer students (53%) of other ethnicity reported having discussed HIV/AIDS with their parents.

The New Jersey Department of Education (1995) conducted the YRBS among two samples of New Jersey school districts, divided according to "special needs" districts and all other districts. New Jersey has 30 such districts. The survey found the following:

A greater percentage of students from special needs schools (63%) engaged in sexual intercourse than students from non-special needs districts (47%). During the prior three months, 46% of the special needs students had sexual intercourse compared to 31% of non-special needs students. 36% of students from special needs districts had sex with three or more partners during their lifetime compared to 21% of students from special needs districts. More special needs students (14%) had sex with more than one partner in the prior month than those students who were from non-special needs districts (9%). Special needs students (53%) were more likely to report having intercourse for the first time when they were 15 or younger than their non-special needs counterparts (33%). Among sexually active students, more non-special needs students (29%) reported consuming alcohol or drugs before their last sexual engagement than special needs students (14%). Students from special needs districts (59%) were less likely than students from non-special needs school districts (70%) to have used a condom during their last sexual engagement. Special needs students (12%) were twice as likely to

have been pregnant or have gotten someone pregnant than non-special needs students (5%). Students from special needs districts (90%) were slightly less likely to report being taught about HIV/AIDS in school than their non-special needs counterparts ((%%). However, more special needs district students reported discussing HIV/AIDS with their parents than non-special needs students (64%). (p. 32)

Recently, enormous fervent change has occurred; educators and health professionals, as well as the public at large are focusing on the urgent health/education needs of our nation's youth. We are on the threshold of real innovation in health promotion and education. The challenge now, as in 1918, is to develop a stronger, dynamic school health infrastructure responsive to epidemiological findings and societal change, and proactively engage in shaping attitudinal and organizational alliance for health (Lavin, 1993).

Therefore, the present study has four purposes: (a) to identify any gaps in the HIV/AIDS curriculum; (b) identify high-risk groups of teens (c) to assess if further HIV/AIDS training and education to high school staff is needed to help the teacher be more comfortable with teaching HIV/AIDS, and (d) finally, identify areas to improve the effectiveness of HIV/AIDS education to ensure the students lead a long, healthy life. The data gathered will then be compared to the data researched by the New Jersey Department of Education in the School Health Education Profile Surveys of 1996 and 1998 as well as use information collected from the 1995 New Jersey Youth Risk Behavior Survey, also written by the New Jersey Department of Education.

CHAPTER III

Methodology

This chapter presents the methods by which the research project will be accomplished. Also included in this chapter will be a description of the population to be studied, the setting in which the research will take place, instruments used, procedures followed, and the data analysis plan.

With the AIDS epidemic continually on the rise especially within the 20-24 year old age bracket, educating our youth is the best weapon for prevention. Therefore, the purpose of the study is to evaluate the 9th-12th grade curriculum with specific attention to HIV/AIDS curriculum at Old Bridge High School. The study will also examine the distribution of student knowledge of HIV/AIDS in terms of age, grade, and gender. The student's perceptions of the curriculum will also be examined and compared to those perceptions of the health teachers.

Sample and Data Collection Procedures

Data will be collected from Old Bridge High School students' grades 9-12 who are enrolled in health class during the second marking period, which begins November 12, 1999 and ends January 27, 1999. The students for the ninth grade health classes are selected alphabetically. Health classes for the 10th and 12th grade students are determined by what students have science lab what day of the week. For example, students who have lab on Mondays and Tuesdays have health first marking period. Juniors are divided into health classes the second half of the year. The term "blocked" is used to describe the

dividing of the Juniors and the Seniors, as the Juniors are divided the first half of the school year and the Seniors are divided the second half of the school year. Therefore, Juniors will be surveyed during their physical education class. Approximately 600 students will be surveyed during the second marking period, 150 per grade. This approximated number was derived from the average teacher caseload each marking period based on the present student population 2,517. Those members of the teaching staff who are teaching an HIV/AIDS unit this marking period agreed to teach the HIV/AIDS unit first to ensure students do not cheat on the surveys.

Approval for this study was obtained from the Superintendent of Schools for Old Bridge Township and the Old Bridge High School principal (see Appendix G). The Superintendent of Schools will meet with the Physical Education and Health Supervisor to explain the collection of the data as well, as the purpose of the study. A consent/information form was delivered to all parents of Old Bridge High School students during the week of November 16, 1998 in a district-wide mailing included with the high school's December newsletter. There was a return/deadline date of January 4, 1999.

Data for the HIV/AIDS knowledge survey pre-test will be collected from December 10, 1998 through December 15, 1998 by the Supervisor of Physical Education/Health. Data for the HIV/AIDS knowledge post-test will be collected from January 18, 1999 through January 22, 1999, also by the Supervisor of Physical Education/Health. The Juniors are the only exception, as previously stated, and were post-tested halfway through the marking period because their physical education activities changed at that point in time and to follow what classes the students would be

transferred into would be too difficult. Also, during the post-test, students were asked to complete a Perception Survey, which contains eight of the same questions that could also be considered student directed from the School Health Education Profile by the health teachers. The two instruments combined would take approximately thirty minutes to complete. This was determined by a pilot test session that was administered to a group of volunteer teachers and students at two different sessions in a similar study.

The students and teachers were informed that: (a) All participation is voluntary, (b) student's names would not be used in any way with reference to the collected data, all data is confidential, the data is for the sole purpose of this study and all of the data, once analyzed, would be destroyed. The pre- and post-test HIV/AIDS Knowledge Surveys were be recorded by matching the student's birthday. After the pre-test survey scores are recorded, they were be placed back into the original envelopes used by the health teacher. All data was be turned into the Supervisor of Physical Education/Health who would give the data to the researcher. The data was matched by class and then by each student's birthday in order for the researcher to analyze all of the data.

The School Health Education Profile was used to determine the teacher's perception survey of the curriculum of Old Bridge High School. This perception survey was administered to the health teachers of Old Bridge High School, also toward the end of the second marking period (approximate date of January 16, 1999). The teachers were able to finish the survey wherever they liked and submitted the survey upon completion to the Physical Education and Health Supervisor prior to January 22, 1999. The Physical Education and Health Supervisor submitted the data to the researcher who then analyzed the data. The information derived from the School Health Education Profile (teacher's

the data. The information derived from the School Health Education Profile (teacher's perceptions) data analysis was compared to the data collected from the students' perceptions survey. All of the data was then compared to the results of the two School Education Profiles administered by the New Jersey Department of Education, 1996 and 1998.

Instrumentation

The HIV/AIDS Knowledge Survey was developed by MAGI Education Services, Incorporated. This tool was used to measure change in students' level of knowledge related to HIV/AIDS. It consists of a 25-item questionnaire with four response options. A reliability of .70 was established through test-retest procedures by the MAGI Corporation. Descriptive statistics were used to analyze scores based on numbers of questions answered correctly.

In order to answer the responses to the questionnaire, a four-answer option with assigned points ranging from 1-4 was used in the scoring procedure for the Knowledge Scale. If a statement was true, points were assigned to responses as follows (for false answers, the points were reversed):

4 points- "I am sure it is true."

3 points- "I think it is true."

2 points- "I think it is false."

1 point- "I know it is false."

The 1998 School Health Education Profile was developed by The New Jersey Department of Education in conjunction with the Center for Disease Control. The tool was developed for educators to gather information, such as evaluation of the present

HIV/AIDS curriculum being used in their particular district, teacher training, and support from the district, etc. The same profile was conducted in 1996. Data for the 1998 survey was recently analyzed by the Center for Disease Control and released by Sarah Kleinman, HIV/AIDS education specialist of the New Jersey State Department of Education.

Setting

The study was conducted at Old Bridge High School located in Old Bridge, New Jersey. It is situated in the southeasterly area of Middlesex County, approximately thirty miles south of New York City, adjoining the Borough of Sayerville and situated ten miles east of New Brunswick, the County Seat, and within fifteen miles of Princeton.

According the HIV/AIDS Quarterly, (June 1998), there were 2,136 AIDS cases reported in Middlesex County. Though the atmosphere of Old Bridge Township appears primarily residential, a considerable portion is zoned for commercial and industrial use with excellent access to the main roads, which are a great asset to the area.

The forty-two square miles that comprise the Township originally were a part of South Amboy. In 1869, Old Bridge separated from South Amboy and was called Madison Township until 1975. At that time, a referendum changed the name from Madison Township to the Township of Old Bridge.

Initially, the Township was comprised of farms and the population grew slowly. In 1880, the population was 1,662 and in 1950 it had reached only 7,365. Building increased quickly and the population in 1960 was 22,772. The census in 1980 reported 51,406 people. This number was questioned by the authorities, as there are six post offices in addition to Old Bridge bearing the names of other communities such as Matawan, South Amboy, Parlin, Jamesburg, Cliffwood, and Keyport. Today, the

Township population is estimated to be 56,000 and continued growth is forecasted. Of the Township's 42 square miles, approximately one-third is developed.

The school district is comprised of twelve elementary schools grades K-5 that each has approximately 350 students, two middle schools grades 6, 7, and 8 containing approximately 1,500 students each, and one high school.

One high school, named Madison Township High School to match the name of the town, was built in 1960. In 1975, Madison Township High School's name was changed to Madison Central High School so the name would not duplicate the name of community. Eight years later, 2.3 miles down the road, Cedar Ridge High School was built because of the rapid growth within the township. There was so much rivalry between the two high schools, that during the school year of 1993-1994, the community and the Board of Education merged the two high schools and the school was renamed as Old Bridge High School. The class of 1997 was the first graduating class whose students completed all four years of high school at Old Bridge High School.

There are approximately 250 members of the teaching staff, 8 guidance counselors and 1 college advisor counselor, 1 principal shared between campuses, 1 first vice-principal, and 4 other vice-principals. The first vice-principal and two of the vice-principals are located on what is named the east campus, while the two other vice-principals are located on the west campus. Certain students have schedules that dictate taking a shuttle bus to and from each campus.

Although there are periodic meetings to discuss the merger, it remains a tender issue for many educators and people within the community. Of late, the Board of Education is speculating to build one large comprehensive high school and combine a

few of the elementary schools into the two middle school campuses and then move the two middle schools into the two campuses of the high school.

A breakdown of the student body of Old Bridge High School by gender and ethnicity is presented (see Table 1).

TABLE 1

Actual Numbers of Student Body According to Grade and Ethnicity

Ethnic	Grade 9			Grade 10			Grade 11			Grade 12			Total		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
AP	53	35	88	52	39	91	48	48	96	47	37	84	200	159	359
B	24	22	46	17	28	45	23	23	46	26	20	46	90	93	183
H	20	20	40	28	23	51	23	16	39	20	24	44	91	83	174
W	240	207	447	273	224	497	225	204	429	217	204	421	955	839	1794
GT	337	284	621	370	314	684	321	296	617	310	285	595	1338	1179	2517

Data Analysis

Hypothesis I states that all students that participate in HIV/AIDS training will indicate a significant increase in HIV knowledge. To analyze this hypothesis, the HIV/AIDS Knowledge Survey scores will be created by summing the mean scores for each response on the HIV/AIDS Knowledge Survey. Analysis of Variance (ANOVA) will be used to compare the pre-training mean and the post-training mean for all participants. Additional comparisons will be conducted based on gender, grade, and age.

Hypothesis II states that the increase in HIV/AIDS knowledge will be greater in 9th and 12th grade students than 10th and 11th grade students because of the curriculum design. Gain scores will be calculated by subtracting pre-training scores from post-training scores and the mean gain scores for the 9th and 12th graders will be compared to the mean gain scores of the 10th and 11th graders by using an ANOVA.

Hypothesis III states that a significant relationship will exist between knowledge scores and perception of preparedness regarding HIV/AIDS decisions. To analyze this hypothesis, a Pearson correlation will be computed to determine the relationship between post-training knowledge scores and perception of preparedness.

Hypothesis IV states that teachers will indicate significantly greater coverage of HIV/AIDS curriculum than students. To analyze this hypothesis, the student's responses to question 4 a-p will be compared to the teacher's responses using a 2x2-chi square (teacher's yes/no by student's yes/no) for each question. In this analysis, the teacher's responses to each question and the student's responses to each question will be analyzed to determine whether a relationship exists between the student's and teacher's perceptions of whether or not these topics were covered.

Hypothesis V states that the students represented in this study would indicate less comfort than teachers in talking about HIV/AIDS, high-risk behavior, and co-ed classes. To analyze this hypothesis, the student's responses to question 5 d and e will be compared to the teacher's responses using a 2x2-chi square (teacher's yes/no by student's yes/no) for each question. In this analysis, the teacher's responses to each question and the student's responses to each question will be analyzed to determine if these issues had an impact on students learning about HIV/AIDS difficult.

Hypothesis VI states that teachers will indicate less comfort than students with HIV/AIDS curriculum materials, support of administration, logistics (i. e., large classes, co-ed classes) and parents will. The student's responses from, questions 5 a, b, c, f, and g, will be compared to the teachers responses using a 2x2-chi square (teacher's yes/no by student's yes/no) for each question. In this analysis, the teacher's responses to each

question and the student's responses to each question will be analyzed to determine if these issues had an impact on teachers teaching about HIV/AIDS to see if was difficult.

CHAPTER IV

Analysis of the data

This chapter presents a review of the hypotheses, a brief overview of collection of data, and the results of the statistical analyses conducted on the data collected in this study. The chapter presents basic descriptive data on the participants and variables in this study. This is followed by the results of hypothesis testing of the questions of study interest.

Review of Hypotheses and Collection of Data

This study had four purposes. The first was to identify any gaps in the curriculum and any related problems with policies relative to HIV/AIDS in Old Bridge High School and ensure the new curriculum aligns to the New Jersey Core Curriculum Standards. The second was to identify high-risk groups of teens. The third purpose was to assess if further HIV/AIDS training/education to high school staff was needed to help the teachers be more comfortable with teaching HIV/AIDS. Finally, the fourth purpose of the study was to identify areas to improve the effectiveness of HIV/AIDS education to ensure the students lead a long, healthy life.

Hypothesis 1: States that all students that participate in HIV/AIDS training will indicate a significant increase in HIV knowledge.

Hypothesis 2: States that the increases in HIV/AIDS knowledge will be greater for 9th and 12th grade students than for the 10th and 11th grade students.

Hypothesis 3: States that a significant relationship will exist between knowledge scores and perceptions of preparedness regarding HIV/AIDS decisions.

Hypothesis 4: States that teachers will indicate significantly greater coverage of the HIV/AIDS curriculum than students.

Hypothesis 5: States that students would indicate less comfort than teachers in talking about high-risk behavior and co-ed classes.

Hypothesis 6: States that teachers will indicate less comfort than students in materials, administration, logistics, and parental concerns.

Students who are grades 9 through 12 that had health class during the second marking period were pre- and post-tested with an HIV/AIDS knowledge survey designed by MAGI Corporation. Students were tested before learning about HIV/AIDS and were tested after the curriculum was presented. Teachers were also given a survey to complete; which would later be compared to student data. All of the data collected from these surveys were then compared to information derived from the New Jersey Department of Education.

Descriptive Analyses

Four hundred seventy-eight student participants and 9 teacher participants participated in this study. A frequency distribution on their ages is presented in Table 2. The ages of the students ranged from 11 years old to 18 years old. The mean age was 15.69 years old.

A frequency distribution on the participants' grade levels is presented in Table 3. The grades were represented by similar numbers of participants with 120 (25.1%) from

grade 9, 118 (24.7%) from grade 10, 110 (20.9%) from 11th grade, and 140 (29.3%) from 12th grade.

TABLE 2
Frequency Distribution of Age

Age	N	Percent	Cumulative Percent
11	1	.2	.2
13	7	1.5	1.7
14	97	20.3	22.0
15	114	23.8	45.8
16	124	25.9	71.8
17	113	23.6	95.4
18	<u>22</u>	<u>4.6</u>	100.0
Total	478	100.0	

TABLE 3
Frequency Distribution of Grade

Grade	N	Percent
9	120	25.1
10	118	24.7
11	100	20.9
12	<u>140</u>	<u>29.3</u>
Total	478	100.0

Table 4 presents a frequency distribution on pre-training knowledge scores. Pre-training knowledge scores ranged from a low of 27 to a high of 99. Students' perceptions of what had been taught concerning HIV/AIDS information was different from what the teacher's perceptions of what had been taught in their classes is a possible explanation for the range of scores displayed by the students regarding HIV/AIDS knowledge: 31 of the 517 students failed the pre-test with a score under 65. The mean pre-training knowledge score was 80.24 with a standard deviation of 8.96.

TABLE 4
Frequency Distribution of HIV/AIDS Knowledge Pre-Test Scores

Pre	N	Percent	Cumulative Percent
25-29	1	.2	.2
30-34	0	0.0	.2
35-39	0	0.0	.2
40-44	2	.4	.6
45-49	1	.2	.8
50-54	2	.4	1.3
55-59	5	1.0	2.3
60-64	16	3.3	5.6
65-69	25	5.2	10.9
70-74	67	14.0	24.9
75-79	82	17.2	42.1
80-84	111	23.2	65.3
85-89	100	20.9	86.2
90-94	50	10.5	96.7
95-99	<u>16</u>	<u>3.3</u>	100.0
Total	478	100.0	

Table 5 presents a frequency distribution on post-training knowledge scores.

These scores ranged from 28 to 99 with a mean of 82.88 and a standard deviation of 8.95.

Like the pre-training scores, most post-training knowledge scores were 65 and above.

TABLE 5
Frequency Distribution of HIV/AIDS Knowledge Post-Test Scores

Post	N	Percent	Cumulative Percent
25-29	1	.2	.2
30-34	1	.2	.4
35-39	0	0.0	.4
40-44	0	0	.4
45-49	1	.2	.6
50-54	3	.6	1.3
55-59	4	.8	2.1
60-64	10	2.1	4.2
65-69	23	4.8	9.0
70-74	51	10.7	19.7
75-79	62	13.0	32.6
80-84	86	18.0	50.6
85-89	122	25.5	76.2
90-94	84	17.6	93.7
95-99	<u>30</u>	<u>6.3</u>	100.0
Total	478	100.0	

A frequency distribution on the change scores is presented (see Table 6). These change scores ranged from a reduction of -51 to an increase of 33. The mean change score was 2.64 with a standard deviation of 8.62. Approximately one third of the participants had lower post-test scores than pre-test scores, and 2/3 increased their knowledge levels from the pre to post test.

TABLE 6
Frequency Distribution of Knowledge of HIV/AIDS Test Change Scores

Change	N	Percent	Cumulative Percent
> - 35	1	.2	.2
-35 - -31	4	.8	1.0
-30 - -26	2	.4	1.5
-25 - -21	1	.2	1.7
-20 - -16	9	1.9	3.6
-15 - -11	20	4.2	7.7
-10 - -6	38	7.9	15.7
-5 - -1	85	17.8	33.5
0 - 4	133	27.8	61.3
5 - 9	97	20.3	81.6
10 - 14	51	10.7	92.3
15 - 19	21	4.4	96.7
20 - 24	7	1.5	98.1
25 - 29	4	.8	99.0
30 - 34	4	.8	99.8
35 - 39	0	0.0	99.8
40 - 44	0	0.0	99.8
45 - 49	1	.2	100.0
Total	478	100	

A frequency distribution on the participants' level of preparedness to make decisions regarding HIV/AIDS is presented in Table 7. The level of preparedness reported was high, with 76% of the participants indicating that they were satisfied or highly satisfied with their preparedness to make decisions regarding HIV/AIDS.

TABLE 7
Frequency Distribution on Perception of Students' Feeling Prepared to Make Decisions Regarding HIV/AIDS

Prepared	N	Percent
One	9	1.9
Two	15	3.1
Three	91	19.0
Four	162	33.9
Five	<u>201</u>	<u>42.1</u>
Total	478	100.0

A breakdown of the means and standard deviation on the pre-test, post-test, change scores, and level of preparedness by grade is presented in Table 8 .

TABLE 8
Means and Standard Deviations on Pre, Post, Gain of HIV/AIDS Knowledge Test and Feeling Prepared to Make Decisions Regarding HIV by Grade

Variable	Grade							
	9		10		11		12	
	M	SD	M	SD	M	SD	M	SD
Pre	77.5	7.63	78.74	10.22	81.46	10.34	82.70	7.85
Post	85.42	9.97	80.07	10.57	81.30	9.14	82.84	8.21
Gain	7.92	9.33	1.33	10.06	-.16	11.54	.14	6.42
Prepared	4.36	.80	3.85	1.08	4.16	.96	4.09	.88

M = Mean

Analysis of Hypotheses

Hypothesis 1 stated that the students who participated in HIV/AIDS training would indicate a significant increase in HIV knowledge.

Paired sample t-tests were used to compare the pre-training HIV/AIDS knowledge scores to the post-training HIV/AIDS knowledge scores for all participants, by gender, by grade, and by age. The results of these analyses are presented in Table 9. The results indicate that significant pre-post difference was found, $t(477)=5.16$, $p=.001$. These results indicate that the pre-knowledge mean of 80.15 was significantly lower than the post-training mean of 82.48.

TABLE 9
Paired Sample T-Test on Pre-training and Post-training Knowledge Scores

Group	<u>Pre</u>		<u>Post</u>		T	Df	Significance
	M	SD	M	SD			
All Students	80.15	9.20	82.48	9.65	5.16	477	.001
Males	78.67	9.40	80.64	10.25	2.65	237	.009
Females	81.85	8.05	84.53	7.87	5.18	238	.001
9 th Grade	77.50	7.62	85.41	9.97	9.30	119	.001
10 th Grade	78.73	10.21	80.06	10.57	1.43	117	.15
11 th Grade	81.46	10.34	81.30	9.14	.14	99	.89
12 th Grade	82.70	7.84	82.84	8.21	.26	139	.79
14 yr	77.80	7.04	85.48	9.73	7.87	103	.001
15 yr	78.61	10.11	80.82	11.13	2.43	114	.01
16 yr	80.94	10.39	81.20	9.05	.26	123	.79
17 yr	83.35	7.25	82.94	8.28	.62	112	.53
18 yr	78.45	10.56	81.77	7.78	2.74	21	.01

Further information gleaned from the HIV/AIDS knowledge test worthy of note are the following:

The pre-post difference was significant for males $t(237)=78.67, p=.009$. These results indicate that the pre-training mean of 78.67 for the males was significantly lower than the post-training mean of 80.64

The pre-post difference was significant for the females $t(238)=5.18, p=.001$. These results indicate that the pre-training mean of 81.85 for the females was significantly lower than the post-training mean of 84.53.

The pre-post difference was significant for the 9th graders $t(119)=9.30, p=.001$. These results indicate that the pre-training mean of 77.50 for the 9th graders was significantly lower than the post-training mean of 85.41.

The pre-post difference was not significant for the 10th graders $t(117)=1.43, p=.15$. These results indicate that the pre-training mean of 78.73 for the 10th was not significantly different than the post-training mean of 80.06.

The pre-post difference was not significant for the 11th graders $t(99)=.14, p=.89$. These results indicate that the pre-training mean of 81.46 for the 11th graders was not significantly different from the post-training mean of 81.30.

The pre-post difference was not significant for the 12th graders $t(139)=.26, p=.79$. These results indicate that the pre-training mean of 82.70 for the 12th graders was not significantly different from the post-training mean of 82.84.

Hypothesis 2: The increase in HIV/AIDS knowledge will be greater for 9th and 12th grade students than for 10th and 11th grade students. The rationale for this hypothesis is because ninth and twelfth graders have HIV/AIDS information presented in

these grades. Tenth grade health teachers teach driver's education, while the eleventh grade health teachers teach mental health.

To analyze this hypothesis, knowledge change scores were computed by subtracting the pre-training scores from the post-training scores. Then, a one way analysis of variance was computed with change scores as the dependent variable and grade as the independent variable. This analysis provides a comparison of the mean pre-training/post-training change score by grade. The results, presented in Table 10 indicate that a significant difference was found [$F_{3,466}=29.64, p=.0001$]. Based on this finding, Scheffe post hoc comparisons were conducted to pinpoint group differences. The results of the Scheffe analysis indicated that the mean change score of 7.92 for the 9th graders was significantly greater than the means of 1.33 for the 10th graders, the mean of -.16 for the 11th graders, and the mean of .14 for the 12th graders. As a result of these findings, this hypothesis is partially confirmed. The 9th grade students did show a significantly greater change than the 10th and 11th grade students, as well as the 12th grade students. No differences were found between the 12th grade students and the 10th and 11th grade students.

TABLE 10
Analysis of Variance Results on change Scores by Grade

Source	DF	Sum of Squares	Mean Squares	F Ratio	Significance
Between	3	5580.57	1860.19	29.64	.0001
Within	466	29241.66	62.75		
Total	469	34822.23			

Hypothesis 3: A significant relationship will exist between knowledge scores and perceptions of preparedness regarding HIV/AIDS decisions.

A Pearson correlation coefficient was computed between post-training knowledge scores and perceptions of preparedness to make decisions regarding HIV/aids to analyze this hypothesis. A significant correlation of .33 ($p=.001$) was found. This correlation indicates a relationship of moderate strength between these variables, which suggests that students with higher post-training scores tended to indicate greater satisfaction with their ability to make decisions regarding HIV/AIDS than students with lower post-training scores. As a result of these findings, this hypothesis is confirmed.

Hypothesis 4: Teachers will indicate significantly greater coverage of the AIDS curriculum than students (question 4a-p).

Questions 4A through 4P of the HIV/AIDS Curriculum Survey concerned the topics taught in health courses. The students and teachers responses to whether or not these topics were covered are presented in Table 11. A 2 X 2 Chi² analysis was originally planned to determine if a relationship exists between student and teacher views on topic coverage. However, only 9 teachers responded to the questionnaire, which was insufficient to compute a valid Chi² analysis. As a result, the number and percent of students indicating yes or no to each topic is presented.

The student and teacher responses suggest that students perceived less coverage of the topics than did teachers. These results are presented in Table 11. One hundred percent of the teachers indicated covering topics concerning the following: (a) how HIV is and is not transmitted, (b) how HIV affects the immune system, (c) needle sharing behaviors that transmit HIV infection, (d) sexual behaviors that transmit HIV, (e) reasons

TABLE 11: Student and Teacher Perception of Topic Coverage

Question 4	Student				Teacher			
	YES		NO		YES		NO	
	N	Percent	N	Percent	N	Percent	N	Percent
A-Transmission	414	90	45	10	9	100.0		
B-Affects immune system	399	86.7	61	13.3	9	100.0		
C-Progression	347	75.4	113	24.6	8	88.9	1	11.1
D-Transmission	403	87.6	57	12.4	9	100.0		
E-Sexual Behaviors Transmission	408	88.7	52	11.3	9	100.0		
F-Reasons for Choosing Abstinence	390	84.8	70	15.2	9	100.0		
G-Use of Condoms	392	85.2	68	14.8	9	100.0		
H-Condom Efficiency	395	85.9	65	14.1	9	100.0		
I-Influence of Alcohol & Other Drugs	346	75.2	114	24.8	9	100.0		
J-Statistics on Adolescent Death & Disability	276	60.0	184	40.0	7	77.8	2	22.2
K-social norms	301	65.4	159	34.6	7	77.8	2	22.2
L-Statistics on Risk Behaviors	321	69.8	139	30.2	7		2	22.2
M-Testing & Counseling Information	351	76.3	109	23.7	7		2	22.2
N-Compassion & Support	311	67.6	149	32.4	9	100.0		
O-Perceptions of Risk	361	78.5	99	21.5	9	100.0		
P-Social Impact	333	72.6	126	27.4	9	100.0		

for abstinence, (f) correct condom usage, (g) condom efficiency, (h) influence of alcohol and drugs on HIV infection risk behaviors, (i) compassion for people living with HIV/AIDS, (j) perceptions of risk, and (k) the societal impact of HIV/AIDS. For each of these questions which 100% of the teachers indicated coverage, from 10.0% to 32.4% of the students indicated that their teacher did not cover these topics. The largest percentages of students indicating no coverage was as follows:

Compassion and support for people living with HIV/AIDS was 32.4%.

Societal impact of HIV/AIDS was 27.4%

Influence of alcohol/drugs on HIV infection risk behaviors was 24.8%.

Perceptions of risk for HIV/AIDS was 21.5%.

Some teachers (22.2%, $m =$) did not indicate coverage of topics regarding statistics on adolescent death and disability related to HIV/AIDS, groups attitudes toward risk behaviors related to HIV infection, statistics on the risk behaviors related to HIV infection among adolescents and adults, and information on HIV testing and counseling. Students' responses to these topics support the teachers' responses where from 23.7% to 40.0% of the students indicated that their teachers did not cover these topics.

Hypothesis 5: Students would indicate less comfort than teachers in talking about high-risk behavior and co-ed classes (question 5d-e).

Questions 5D and 5E regarded whether or not co-ed class and feeling uncomfortable talking about HIV/AIDS risk behaviors made learning about HIV/AIDS difficult. The student and teacher responses to these questions are presented in Table 12. Regarding co-ed classes, 90 students (19.6%) indicated that this made learning difficult, and none of the teachers indicated that this made learning difficult. For question 5E concerning feeling uncomfortable talking about HIV risk behaviors, 95 students (20.7%)

indicated yes, and none of the teachers indicated that this made learning difficult. (see Table 12)

TABLE 12: Student and Teacher Perceptions of Issues that Cause Learning Difficulties

Question	Student			Teacher		
	YES N	Percent	NO N Percent	YES N Percent	NO N Percent	
A-Inadequate Training	104	22.6	356 77.4	3 33.3	6 66.6	
B-Inadequate Materials	118	25.7	342 74.3	3 33.3	6 66.6	
C-Large Classes	120	26.1	340 73.9	7 77.8	2 22.2	
D-Co-Ed Classes	90	19.6	370 80.4		9 100.0	
E-Uncomfortable talking	95	20.7	365 79.3		9	
F-Other Demands	110	23.9	350 76.1	1 11.1	8 88.9	
G-Parental Concern	90	19.6	370 80.4		9 100.0	
H-Community Concern	81	17.6	379 82.4		9 100.0	
I-Insufficient Admin Support	102	22.2	358 77.8		9 100.0	
J-Administrative Restrictions	98	21.3	362 78.7		9 100.0	
K-Low Student Interest	109	23.7	351 76.3	1 11.1	8 88.9	

Hypothesis 6: Teachers will indicate less comfort than students in materials, administration, logistics, and parental concerns (question 5a-d, f, g).

Questions A through D and F through I concerned other teaching/learning issues and whether or not these issues made learning about HIV/AIDS difficult. For question A on teacher training and question B on materials, 22.6% and 25.7% of the students indicated yes, respectively, while 33.3% of the teachers indicated yes to these questions. However, for question C regarding class size, 26.1% of the students and 77.8% of the teachers indicated that class size made learning about HIV/AIDS difficult. The teachers unanimously indicated that other demands of class time, parental concerns or opposition, community concerns or opposition, and insufficient administrative support did not make learning about HIV/AIDS difficult. From 17.6% to 22.2% of the students indicated that these issues made learning about HIV/AIDS difficult. Also, only one teacher (11.1%) indicated that low student interest or enthusiasm made learning about HIV/AIDS difficult, while 23.7% of the students indicated that this was an issue.

Chapter Summary

The results of the data analyses were presented in this chapter with significant findings in several areas. The results indicate that significant pre-post difference was found in each grade regarding HIV/AIDS knowledge. Specifically, the 9th grade students showed a significantly greater change in HIV/AIDS knowledge score the 10th, 11th, and 12th grade students.

There was a significant relationship between knowledge scores and perceptions of preparedness regarding HIV/AIDS decisions.

The student and teacher responses suggest that students perceived less coverage of the topics than did teachers.

Ninety students (19.6%) indicated co-ed classes made learning about HIV/AIDS difficult. Ninety-five students (20.7%) indicated concern about feeling uncomfortable talking about HIV risk behaviors while none of the teachers indicated that this would make learning difficult.

Teachers did not indicate less comfort than students with regard to teacher training and materials; however, teachers did indicate that class size made learning about HIV/AIDS difficult. The teachers also unanimously indicated that other demands of class time, parental concerns or opposition, community concerns or opposition, and insufficient administrative support did not make learning about HIV/AIDS difficult. One teacher indicated that low student interest or enthusiasm made learning about HIV/AIDS difficult while 23.7% of the students indicated that this was an issue.

The responses obtained during this study have provided a meaningful database. The significance and implications of these findings for stopping the spread of HIV/AIDS among teens as well as other populations will be discussed in Chapter V.

CHAPTER V

Summary, Conclusions and Recommendations

This chapter begins with a review of the purpose, goals, and specific aims of the study. Also, discussion of the results of the data analysis is organized and presented within the framework of each hypothesis and appropriate literature is also discussed. Included in this chapter are suggestions for possible interventions, derived from this study. Limitations of the study and recommendations for future research are also presented.

Review of Purpose of the Study, Goals, and Specific Aims

The purpose of the study was to: (a) Identify gaps in the curriculum and any related problems with policies relative to HIV/AIDS in Old Bridge High School and ensure the new curriculum adheres to the New Jersey Core Curriculum Standards. (b) Identify high- risk groups of teens in need of HIV/AIDS education and prevention and provide the necessary education to those students in age appropriate teaching units. (c) Assess whether or not further HIV/AIDS training and education to high school staff is needed to promote health teachers comfort level with teaching HIV/AIDS. (d) Identify areas to improve the effectiveness of HIV/AIDS education in the Old Bridge School District to provide a curriculum with a solid knowledge base of health education specifically HIV/AIDS to ensure the students of Old Bridge High School all the possibilities of leading a long and healthy life.

There was an evaluation of the knowledge of Old Bridge High School students concerning HIV/AIDS and their perceptions of the curriculum presently being taught at Old Bridge High School. Each of the students that fulfilled their health requirement during the second marking period grades 9-12, was pre- and post-tested with the MAGI HIV/AIDS questionnaire which measures a student's knowledge concerning information about HIV/AIDS. At the end of the HIV/AIDS unit, the HIV/AIDS post-test survey was administered. In addition to the HIV/AIDS survey, a student perception survey was also administered, at this time, in order to collect data regarding the student's perceptions of the present HIV/AIDS Curriculum being taught at Old Bridge High School. The perception survey was developed by using selected information, which was provided by the New Jersey Department of Education that included questions from the 1998 School Information Profile. The data were collected in order to evaluate the student impact of the school's HIV/AIDS curriculum. The health teachers were also given a School Health Educator Profile, which was completed by each health teacher of Old Bridge High School, and compared to those findings of the New Jersey State Department of Education. The findings of the health teacher's perceptions of the curriculum were also compared to the findings of the student's perceptions of the curriculum. All findings were evaluated and appropriate recommendations will follow. With the results of the study, necessary changes can be made to the HIV/AIDS curriculum not only to be in coordination with the New Jersey Core Curriculum Standards but also improve the student impact/knowledge of HIV/AIDS at Old Bridge High School.

Conclusions

This study had four purposes. The first was to identify gaps in the curriculum and any related problems with policies relative to HIV/AIDS in Old Bridge High School and ensure the new curriculum aligns to the New Jersey Core Curriculum Standards.

Hypothesis 1: All students that participate in HIV/AIDS training will indicate a significant increase in HIV knowledge.

Hypothesis 2: The increases in HIV/AIDS knowledge will be greater for 9th and 12th grade students than for the 10th and 11th grade students. Both of these hypothesizes, address the first purpose of the study which is to identify gaps in the HIV/AIDS Curriculum. According to the study, there are gaps in the present curriculum. The 9th graders had the most significant improvement in HIV/AIDS knowledge over the 10th, 11th, and 12th graders. Although most pre-training scores were 65 and above, which is passing, one must know more information to pass if he/she wants to be sexually active and live a healthy life without contracting STD's especially with regard to HIV/AIDS. Most of the post-training scores, were also 65 and above which could be an indication that the health curriculum of Old Bridge High School is not as efficient at accomplishing teaching about HIV/AIDS as was anticipated. Approximately one third of the participants had lower post-test scores than pre-test scores, and two thirds of the population had increased their knowledge levels from the pre- to post-test. The scores were 80.15 and 82.48 respectively. While one may consider the score of 82.48 to be a "B" average, attaining such an average in a life/death situation could be the difference between living and dying for some of our youth.

The pre-post difference was significant for males. These results indicate that the pre-training mean of 78.67 for the males was significantly lower than the post-training mean of 80.64 for a difference of 1.97.

The results for the females indicate that the pre-training scores (\underline{M} =81.85) was significantly lower than the post-training (\underline{M} =84.53) for a difference of 2.68. The results of this survey indicate that the females pre-training scores (81.85) were higher than the males pre-training scores (\underline{M} =78.67) for a difference of 3.18. The results of this survey indicate females post-training scores (\underline{M} =84.53) also had a higher post-training score than the males (\underline{M} =80.64) for a difference of 3.89.

In a study using the same HIV/AIDS survey instrument conducted in 1995 in the Hudson Valley of New York, the researcher found that females in the study also tested higher in the HIV/AIDS survey than the males in both the pre- and post-test scores (Wanless-Steindler, 1995).

According to the statistics in the 1995 New Jersey Department of Education, New Jersey Youth Risk Behavior Survey (YRBS) 49% of New Jersey high school students reported ever having engaged in sexual intercourse and 33% had done so in the past three months. A greater percentage of male students (54%) reported having ever engaged in sexual intercourse than females (45%). However, males (36%) were only slightly more likely than females (32%) to report having sex in the prior three months. A greater percentage of students from special needs school (63%) engaged in sexual intercourse than students from non-special needs districts (47%). During the prior three months, 46% of special needs students had sexual intercourse compared to 31% of the non-special needs students. Less females than males are sexually active, perhaps this is why females

test higher. Maybe the females are waiting for the appropriate partner and want to be sure they have more of the facts about HIV/AIDS and other STD's before they engage in sexual encounters. The females in this study also tested higher than the males.

In recent years, numerous HIV prevention programs were introduced in school settings, but results were mixed. However, current approaches to school based AIDS education are being developed from a stronger theoretical framework, applying the previous experience of other prevention efforts and program evaluations (Levy et al., 1995). This would prove true for the students at Old Bridge High School because as a group their results were of a "B" average. Now the goal would be to have each student have an "A" average.

Studies conducted with only adolescent participants suggest that adolescents' general knowledge of HIV/AIDS has increased over the course of the epidemic. However, knowledge beyond common HIV transmission routes such as unprotected sexual intercourse and the sharing of needles with an infected individual is less common, including knowledge about the immune system, condom use, and the value of HIV testing. Although educational interventions have been successful in dispelling casual contact misconceptions, as many as one third of teenagers continue to believe misconceptions about the risk of contracting HIV from donating blood, venipuncture, and mosquito bites. This finding further supports the need for extensive AIDS education for youth of all ages (Ford & Russo, 1997).

Hypothesis 3: States: a significant relationship will exist between knowledge scores and perception of preparedness regarding HIV/AIDS decisions. This hypothesis refers to the second purpose of the study, which is to identify high-risk groups of teens.

Students with a higher post-training score tended to indicate greater satisfaction with their ability to make decisions regarding HIV/AIDS than students with lower post-training scores. Certainly not feeling prepared is going to put a person into the high-risk category. One purpose of teaching the HIV/AIDS curriculum would be to assist students to make appropriate decisions that would ensure them all a long, healthy life.

The New Jersey Department of Education-HIV/AIDS Prevention Program-Intensive Evaluation Report (1998), the CDC criteria for effective HIV/AIDS curricula, and summary research characteristics of effective criteria (Kirby et al., 1994) and the New Jersey Department of Education Core Curriculum Standards (1994) Course Proficiencies in Comprehensive Health Education and Physical Education, all make reference to skills related to HIV/AIDS prevention. Such skills include interpersonal communication, negotiation, decision making, and consumer skills. Several teachers have inquired about skill-based HIV/AIDS instruction and yet just over half of the teachers (54%) had heard of skills-based instruction. Almost 95% wanted to learn more about it. Additionally, 40% of the teachers had used skills-based instruction in some way within the past two years (New Jersey Department of Education, 1996).

Success is possible when HIV education is comprehensive, integrated with other risk-reduction issues such as drugs and sexuality, and provides skill-building and active learning opportunities for very young teens (Levy et. al., 1995). Cortese (1993) claims the nation's serious drug problem calls for skills-building in children and youth and the devastating effect of HIV/AIDS requires urgent educational intervention. History has taught us well. We cannot have meaningful, effective health education programs in schools by merely responding to the crisis of the day. By so doing, the program; not the

health program; ultimately disappears. A comprehensive, well-planned program includes a framework that allows for the inclusion of the crisis of the day appropriately and in proper relationship to other major health concepts.

Teachers talk about responsible sexual behavior, which includes abstinence, only slightly more than they do about contraceptives. Yet these topics often represent real situations that students face and are much more concrete than general decision making skills. Some topics such as contraception and condoms and sexual expression without risk provide real options for reducing the risks for teenagers who are likely to experiment with sexual behavior in spite of recommendations for abstinence (Firestone, 1994).

Further, results suggest that given the relatively large number of students already sexually active by the seventh grade, a need exists for HIV/AIDS education to begin at an earlier age (Levy, et al., 1995). Teaching HIV/AIDS at an earlier age has now become a mandate of the New Jersey Core Curriculum Standards (New Jersey Department of Education, 1998). Research suggests schools need to get the students' attention before they become sexually active in order to have more of an effect on the students. The information suggests middle school teachers do not take a strong stand on appropriate behavior. The instructional approach over-emphasizes lecture and recitation and make to little use of role-playing and peer leadership. Moreover, condom distribution is essentially nonexistent (Firestone, 1994).

Presenting age appropriate information about such an important life or death topic as HIV/AIDS to students's pre-puberty age allows reinforcement and solidifying of critical knowledge over time. Since many of our youth become sexually active at an

early age, starting HIV/AIDS education earlier may decrease the number of AIDS cases in people that are in the 19-24 year old age bracket.

Hypothesis IV: States teachers will indicate greater coverage of HIV/AIDS curriculum than students (question 4a-p). This hypothesis could be considered for the third purpose of the study, which is to provide further HIV/AIDS training and education for the high school staff where needed. The student and teacher responses suggest that students perceived less coverage of topics than teachers did. From 10% to 32.4% students indicated teachers did not cover topics concerning how HIV is transmitted, how HIV affects the immune system, needle sharing behaviors that transmit HIV infection, sexual behaviors that transmit HIV, reasons for abstinence, correct condom use, and condom efficiency. The reason for this could be few teachers address key prevention-orientation topics. Topics that are difficult because of strong taboos (e. g., masturbation) or controversy (e. g., abortion and contraception) also receive limited attention (Firestone, 1994).

Information discovered in the School Health Education Profile (1998) given by the New Jersey Department of Education, the following topics had the following percentage of health teachers covering those topics in class: (a) how HIV is transmitted-100%, (b) how HIV affects the immune system-99%, (c) needle sharing behaviors that transmit HIV infection-100%, (d) sexual behaviors that transmit HIV-92%, (e) reasons for abstinence-98%, (f) correct condom use-86%, (g) condom efficiency-95%, (h) adolescent HIV rates-87%, (i) risk behaviors-92%, and (j) support for people who are HIV infected-93%.

In comparison, the 1995 New Jersey Department of Education (YRBS) indicated 94% of the students reported being taught about HIV/AIDS in school. Rates of education varied by student age and ethnicity. Regardless of age, over 9 in 10 students, 15 years of age or younger (96%), 16 to 17 years old (94%), or ages 18 and over (92%), had learned about AIDS in school. White students (96%) were slightly more likely than Black (92%), Hispanic (91%), or students of other ethnic origins (91%) to have been taught about AIDS in school. In contrast, students from special needs districts (90%) were slightly less likely to report being taught about HIV/AIDS in school than their non-special needs counterparts (95%). However, more special needs district students (71%) reported discussing HIV/AIDS with their parents than non-special needs students (64%).

Hypothesis V: States the students represented in this study would indicate less comfort than teachers in talking about HIV/AIDS, high-risk behaviors and coed classes (question 5d-e). Ninety-five students (20.7%) indicated that there was concern about feeling uncomfortable talking about HIV risk behaviors, while none of the teachers indicated that this made learning difficult. In the SHEPS (New Jersey Department of Education, 1998), 1% of the teachers said they felt uncomfortable. Perhaps the health teachers in New Jersey are more comfortable with the topic of HIV. Teacher interest and comfortable attitudes about sexuality have been found to be the most significant variables in sex education program implementation (Yarber & McCabe, 1984).

Ninety students (19.6%) indicated that co-ed classes made learning difficult while none of the teachers indicated that this made learning difficult while 5% of the teachers said co-ed classes made learning about HIV difficult. The Old Bridge health teachers matched with the results of the SHEPS (New Jersey Department of Education, 1998), as

there were 5% of the teachers in the state who felt co-ed classes made learning about HIV difficult.

New Jersey regulations prohibit separate courses of instruction for boys and girls. However, portions of classes that deal exclusively with human sexuality may be conducted in separate sessions for boy and girls, provided the course content is the same. Old Bridge High School needs to explore separate HIV/AIDS sessions since the study does not specifically indicate whether or not the persons who do not feel prepared, or the students who did not score as high in the post-test are the students who are uncomfortable in co-ed classes.

Hypothesis VI: States teachers will indicate less comfort than student in materials, administration, logistics, and parental concerns (question 5a-d, f, g). Teacher training and materials, 22.6% and 25.7% of the students indicated yes, respectively, while 33.3% of the teachers indicated yes to these questions. However, the questions regarding class size 26.1% of the students and 77.8% of the teachers indicated that class size made learning about HIV/AIDS difficult. Teachers unanimously indicated that other demands of class time, parental concerns or opposition, community concerns or opposition, and insufficient administrative support did not make learning about HIV/AIDS difficult. From 17.6% to 22.2% of the students indicated that these issues made learning about HIV/AIDS difficult. Only one teacher (11.1%) indicated that low student interest or enthusiasm made learning about HIV/AIDS difficult, while 23.7% of the students indicated that this was an issue.

There are several facts pertinent to this study that have been published by the New Jersey Department of Education, (1998) regarding materials, staff in-service training,

curriculum and connection to parents. Forty-five percent of texts used by New Jersey school for HIV/AIDS education were published in the past 4 years compared to 23% of tests used for health education. Meanwhile, 26% of the books used for HIV/AIDS education were published more than eight years ago and 38% of the materials used in health education were published in 1990 or earlier (New Jersey Department of Education, 1998).

Teachers were asked to mention three providers of in-service and continuing education most used by health teachers over the past two years. The organizations mentioned most across the state were Planned Parenthood (9%), the Red Cross (6%), and various sources at Rutgers University (6%).

Half of all teachers at middle schools and high schools (50%) said their district was currently engaged in revising the health curriculum used by the school. Of those currently making revisions to the curriculum, about a third said the principle challenge in making these revisions has been to align state curriculum standards (30%). Other problems in the revision process noted by teachers are searching for new materials and texts for the curriculum (14%) and trying to fit all curriculum content into the instructional time allotted to health education (14%). Another 8% say they update the curriculum almost yearly (New Jersey Department of Education, 1998).

Overall, about half of the 284 principals surveyed (53%) report that parents have provided mainly positive feedback about their school's health education program. Efforts to educate parents about HIV/AIDS are also undertaken in some schools. On fifth of the teachers say they invite parents to attend classes on HIV/AIDS (20%). Another 14% of teachers send education materials on HIV/AIDS to parents. Approximately 1 in 10

teachers say their schools have provided programs on HIV/AIDS for parents (12%) and have sent parents newsletters (11%) on HIV/AIDS (NJDOE, 1998). Getting real about HIV in adolescents means acting on what is now known about the epidemic among youth. It is time for bold steps, not timid reflections (Hein, 1992).

The ultimate goal of this study was identify areas for improving effectiveness of the HIV/AIDS curriculum of Old Bridge High School. There were a number of significant findings derived from the study, which may have practical implications for the school, as well as other involved in research or applied practice in the field of HIV/AIDS education for adolescents.

The first practical application for utilizing the information provided by the study related to communication. Information derived from this study will be presented to the health education teachers, the school principal and the superintendent of schools. If acceptable to the school, the information will also be shared with the students.

The present study demonstrated a lack of student knowledge in the HIV/AIDS arena. Although the average score was a "B" average, while some may think this is a good score, in the case of HIV/AIDS it is not. Students must know all they can about this deadly virus to include transmission, symptoms, and lubricants to be used with condoms. The students also need to have knowledge concerning compassion and support of people living with AIDS, societal impact, and perception of risk for HIV/AIDS and also the influence of alcohol and other drugs has on HIV/AIDS infection risk behaviors. The 9th graders were the only grade to have a significant improvement from their pre-post test training. Therefore, another recommendation is to have either a refresher course each year, or give the students the HIV/AIDS survey each year until they receive a grade of

100%. While most high school principals indicated that students who failed health education would have to retake the course, a number of respondents indicated in comments, that in fact, grades in health and grades in physical education are averaged (New Jersey Department of Education, 1996). Perhaps this is another reason why students may not consider health to be a serious subject and to obtain a "B" average is acceptable to them.

Further research needs to be conducted among students who have been exposed to skill-building as compared to students who were not taught skill-building. To conduct a study around this topic would be beneficial in terms of learning what information may be necessary to add not only to the HIV/AIDS curriculum, but other curriculum such as pregnancy, substance abuse, etc. Once the skills are taught, there would be carry over into other participants as well as other areas of the student's life.

Students need to pass tests to drive and to graduate high school. Perhaps it is time to require each student to achieve 100% on an HIV/AIDS exam since their life could depend on knowing the information about the fatal virus. A study could be conducted in this arena to determine whether or not school districts would install such testing into their requirements.

New Jersey regulations prohibit separate courses of instruction for boys and girls. However, portions of classes that deal exclusively with human sexuality may be conducted in separate sessions for boy and girls, provided the course content is the same. Old Bridge High School needs to explore separate HIV/AIDS sessions since the study does not specifically indicate whether or not the persons who do not feel prepared, or the

students who did not score as high in the post test are the students who are uncomfortable in coed classes.

Since 5% of the teachers are uncomfortable with the subject of HIV/AIDS, then perhaps teacher training would benefit the health teachers. Teachers responsible for this instruction need to be selected for their sensitivity to the contents, so as to make students as comfortable as possible in openly discussing the subject. The Board of Education may want to include such training about a life/death situation in their next years' budget.

Old Bridge High School also has a very strong peer leadership group. Perhaps it is time to make a selection from this already selective group, train them over the summer to teach about HIV/AIDS or decision-making skills to the other classes. Perhaps having college students speak to the seniors about HIV/AIDS would assist with their learning.

Old Bridge School District needs to rewrite the curriculum to match Core Curriculum Standards and teach HIV/AIDS information to the 4th through 8th graders in addition to the high school students and compare that data to another group of students where HIV/AIDS information was not taught in those grades. The Old Bridge School District may also want to employ follow-up studies to determine the actual impact of HIV/AIDS education, as a gauge of the effect of the knowledge acquired.

Another important component would be for the school districts to consider engaging in planning which brings support services into the education effort, especially with regard to guidance counseling services.

Youth were interviewed in the New Jersey School Education Profile in 1998 (New Jersey Department of Education, 1998) where it was found we need to take action by providing further education regarding sexually transmitted diseases, pregnancy and

HIV/AIDS; however, steps in that direction have not been taken. Arrange the curriculum with students on the committee to contribute essential feedback for improvement. Then re-evaluate the program again. Those statistics should prove interesting. Along the same vein would be to take into consideration insuring that supervisors of health education program (or those responsible for the human sexuality/HIV/AIDS education) have expertise in their curricula.

Limitations of the Study

There may be variables that might have influenced the outcome of the study. For example, different cultures do not allow their children to learn about sexuality and HIV/AIDS. The gender of the student could possibly influence the outcome of the study since the females tested higher than the males in both the pre and post HIV/AIDS knowledge test. The gender of the teacher may also influence the outcome of the study especially in a co-ed class. The constellation of the family, whether there are one or two parents, due to divorce, separation, death or incarceration, may influence the outcome of the study. The final limitation could perhaps be the IQ of the student. Perhaps these data may be influenced by student mobility within the school. For example, curricula targeted at ninth graders may be biased by data elicited from later grades by students not present in the district at the time of instruction. The study of Wanless-Steindler, 1995 found that students with a higher IQ did in fact score higher than students with a lower IQ on the HIV/AIDS knowledge test.

Future Research

The first suggestion for future research is to investigate the impact of gender as it relates to HIV/AIDS. The reason for this recommendation is to determine why the

results of the study show females tested higher than males in the pre- post- HIV/AIDS knowledge test in both this study and the study completed by Wanless-Steindler (1995).

The second suggestion for future research is to determine what caused a discrepancy in Hypothesis 4. Hypothesis 4 stated teachers would indicate greater coverage of HIV/AIDS curriculum than students. This study indicated that teachers did indicate a greater coverage of HIV/AIDS curriculum than students. Therefore the second suggestion for future research is to investigate why there was a discrepancy in this finding.

The third suggestion for future research concerns Hypothesis 5. The students represented in this study would indicate less comfort than teachers in talking about HIV/AIDS, high-risk behavior and co-ed classes. Delving further into the issue of students being comfortable talking about HIV/AIDS, high-risk behavior and co-ed classes would provide information that would perhaps be able to insight change in these areas.

It is hoped that further research will be conducted by people interested in educating our youth so that possibly there can be a point where fewer to no lives are lost due to HIV/AIDS.

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Appendix A HIV/AIDS Education Curriculum Survey

HIV/AIDS EDUCATION CURRICULUM SURVEY

There are NO right or wrong answers. Your answers will be private. No one will know that this survey is yours, so please answer honestly.

Please be sure to answer all questions. Also, included with the post survey is a Student Perception Survey. Again, your answers are private so please answer honestly.

Birthdate: ____/____/____
 month day year

Today's Date: ____/____/____
 month day year

Sex: ☐ Male Grade: ☐ 9 ☐ 11 ☐ Other:
 ☐ Female ☐ 10 ☐ 12

Age (as of last birthday): ☐ 13 ☐ 15 ☐ 17
 ☐ 14 ☐ 16 ☐ 18

Racial/Ethnic Background: ☐ White ☐ Asian/Pacific islander
 ☐ Black ☐ Other (please describes):
 ☐ American Indian _____
 ☐ Hispanic

Usual grade point average: ☐ A ☐ B ☐ C ☐ D

Have you always been a student of Old Bridge High School?

☐ yes ☐ no

Indicate which of the years you have been a student of Old Bridge High School.

☐ 9 ☐ 10 ☐ 11 ☐ 12

Part I

Instructions: The questions in this survey are about HIV/AIDS. Read each statement carefully, and decide whether you think it is true or false. Place a check mark () in the first box if you are sure that the statement is true, or in the second box if you think it is true, but are not sure. Check the third box if you think it is false but are not sure. Check the last box if you are sure that the statement is false. Be certain to answer every item, and check only one answer for each item.

Check () One

	I'm Sure This is True	I Think This is True	I think This is False	I'm Sure This is False
1. HIV - infected persons should never share any kind of needles or sharp objects with another person.				
2. If a woman has sex with another woman, she cannot become infected with HIV.				
3. Drug users can transmit HIV to one another.				
4. If someone tests positive for HIV, it does not mean that s/he has been infected with HIV.				
5. Early symptoms of HIV infection are like some common illnesses such as the flu.				
6. Use of drugs and alcohol contributes to HIV transmission by reducing the likelihood that a person will practice "safer" behaviors.				
7. When a person tests positive for HIV, that means s/he has AIDS.				

Check () One

	I'm Sure This is True	I Think This is True	I Think This is False	I'm Sure This is False
8. Having only one sex partner reduces the likelihood of becoming infected with HIV.				
9. When you take the HIV antibody test at a confidential test site, like a family planning clinic, the test results become part of your medical records.				
10. HIV test results may be negative for a short time after a person has become infected with HIV.				
11. Oil based lubricants, such as Vaseline are safe to use with condoms.				
12. Using a condom during sex reduces your chances of becoming infected with HIV.				
13. A person considering having sex should take precautions as if any partner could be HIV infected.				
14. People who live with an HIV infected person can become infected with HIV through casual contact.				
15. Most infants with HIV infection or AIDS got it from a blood transfusion.				
16. There are many more people infected with HIV than those who have AIDS.				
17. The surest way of not getting HIV is by not having sex and not injecting drugs.				

Check () One

	I'm Sure This is True	I Think This is True	I Think This is False	I'm Sure This is False
18. Using a lubricant that dissolves in water, such as K-Y Jelly, reduces the possibility that a condom will break during sex.				
19. To eliminate risk of HIV infection, needles and drug works should be cleaned with bleach and water before using them.				
20. HIV can be transmitted to others by a person who shows no signs or symptoms of infection.				
21. There is a vaccine to prevent HIV infection.				
22. Even if a person carefully selects her/his partners, a condom should always be used during sex.				
23. Using a condom during sex always prevents transmission of HIV.				
24. Early treatment for HIV infection can delay the onset of AIDS.				
25. HIV cannot be transmitted by a person who has recently been infected.				

Appendix B Student Perceptions Survey

1. On a scale of 1-5, how satisfied are you with the present HIV/AIDS curriculum? (Circle number below that best fits your response).

1	2	3	4	5
Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied

2. How well prepared are you to make decisions concerning HIV/AIDS prevention for yourself? (Circle the number below that best fits your response).

1	2	3	4	5
Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied

3. What do you think was the most important benefit of HIV/AIDS instruction? _____

4. During the school year, did your health teacher teach any of the following topics in a required health education course(s) for students in any of grades 6 through 12? (CIRCLE YES OR NO FOR EACH RESPONSE).

a. How HIV is and is not transmitted	YES	NO
b. How HIV affects the immune system.....	YES	NO
c. Disease progression of AIDS.....	YES	NO
d. Needle-sharing behaviors that transmit HIV infection.....	YES	NO
e. Sexual behaviors that transmit HIV infection.....	YES	NO
f. Reasons for choosing sexual abstinence.....	YES	NO
g. Correct use of condoms.....	YES	NO
h. Condom efficiency / how well condoms work.....	YES	NO
i. Influence of alcohol and other drugs on HIV infection risk behaviors.....	YES	NO
j. Statistics on adolescent death and disability related to HIV/AIDS.....	YES	NO
k. Group attitudes (social norms) toward risk behaviors related to HIV infection.....	YES	NO
l. Statistics on the risk behaviors related to HIV infection among adolescents and adults.....	YES	NO

- | | | |
|---|-----|----|
| m. Information on HIV testing and counseling..... | YES | NO |
| n. Compassion and support for persons living with HIV infection/AIDS..... | YES | NO |
| o. Perceptions of risk for HIVinfection/AIDS..... | YES | NO |
| p. Societal impact of HIV infection/AIDS..... | YES | NO |
5. Did any of the following make learning about HIV infection/AIDS difficult for you?
- | | | |
|--|-----|----|
| a. Inadequate training of the teacher..... | YES | NO |
| b. Inadequate materials..... | YES | NO |
| c. Large class size..... | YES | NO |
| d. Coed classes..... | YES | NO |
| e. Uncomfortable talking about HIV risk behaviors..... | YES | NO |
| f. Other demands of class time..... | YES | NO |
| g. Parental concerns or opposition..... | YES | NO |
6. During this school year, has your teacher planned or coordinated health-related projects or activities with members of any of the following groups? (CIRCLE YES OR NO FOR EACH RESPONSE).
- | | | |
|--|-----|----|
| a. Physical education teachers..... | YES | NO |
| b. Other subject areas..... | YES | NO |
| c. School health service staff..... | YES | NO |
| d. School counselors..... | YES | NO |
| e. Medical or public health persons..... | YES | NO |
| f. PTA/PTO..... | YES | NO |
7. During this school year, has this school provided HIV infection/AIDS education for parents in any of the following ways? (CIRCLE YES OR NO FOR EACH RESPONSE).
- | | | |
|---|-----|----|
| a. Sent educational materials on HIV infection/AIDS to parents..... | YES | NO |
| b. Sent letters or newsletters on HIV infection/ AIDS to parents..... | YES | NO |
| c. Provided school programs on HIV infection/AIDS for parents..... | YES | NO |
| d. Invited parents to attend class on HIV infection/ AIDS..... | YES | NO |

Appendix C Health Education Teacher Questionnaire

1998 SCHOOL HEALTH EDUCATION PROFILE

LEAD HEALTH EDUCATION TEACHER QUESTIONNAIRE

This questionnaire will be used to assess school health education across your state or school district. Your cooperation is essential for making the results of this survey comprehensive, accurate, and timely. Your answers will be kept confidential.

Instructions

1. This questionnaire should be completed by the lead health education teacher (or the person acting in that capacity) and concerns only activities that occur in the school listed below. You may consult with other people if you are not sure of an answer.
2. Please use a #2 pencil to fill in the answer ovals completely. Do not fold, bend, or staple this questionnaire or mark outside the answer oval.
3. Follow the instructions for each question.
4. Write any additional comments you wish to make on the back of this questionnaire, and return the questionnaire in the postage-paid envelope provided.

Person completing this questionnaire

Name: _____

Title: _____

School name: _____

District: _____

Telephone number: _____

To be completed by the SEA or LEA conducting the survey

School name: _____

Survey ID			
0	1	2	3
4	5	6	7
8	9	10	11
12	13	14	15
16	17	18	19
20	21	22	23
24	25	26	27
28	29	30	31
32	33	34	35

Definitions

Required health education refers to instruction about health education topics (such as injuries and violence, alcohol and other drug use, tobacco use, nutrition, human sexuality, HIV infection/AIDS, and physical activity), that a student must pass for graduation or promotion from this school. A required health education course is taught as a separate semester- or quarter-long unit of instruction for which the student receives credit.

HIV infection/AIDS education refers to instruction about preventing HIV infection and AIDS.

The following seven (7) questions refer to required health education courses (not health education units or lessons integrated into other subject areas) taught in grades 6 through 12 in this school.

1. Is a health education course required for students in any of grades 6 through 12 in this school? (MARK ONE RESPONSE.)

- Yes
• No **SKIP TO QUESTION 11.**

2. Are teachers in this school required to use any of the following materials in a required health education course(s) for students in grades 6 through 12? (MARK YES OR NO FOR EACH RESPONSE.)

	YES	NO
a. State curriculum, guidelines, or framework for health education.....	<input type="checkbox"/>	<input type="checkbox"/>
b. District curriculum, guidelines, or framework for health education.....	<input type="checkbox"/>	<input type="checkbox"/>
c. School curriculum, guidelines, or framework for health education.....	<input type="checkbox"/>	<input type="checkbox"/>
d. Commercially developed health education curricula.....	<input type="checkbox"/>	<input type="checkbox"/>
e. Teacher's guides to student textbooks.....	<input type="checkbox"/>	<input type="checkbox"/>

3. During this school year, have teachers in this school tried to increase student knowledge on any of the following topics in a required health education course(s) in any of grades 6 through 12? (MARK YES OR NO FOR EACH RESPONSE.)

	YES	NO
a. Alcohol and other drug use prevention.....	<input type="checkbox"/>	<input type="checkbox"/>
b. Chronic diseases such as diabetes and asthma.....	<input type="checkbox"/>	<input type="checkbox"/>
c. Community health.....	<input type="checkbox"/>	<input type="checkbox"/>
d. Conflict resolution/violence prevention.....	<input type="checkbox"/>	<input type="checkbox"/>
e. Consumer health.....	<input type="checkbox"/>	<input type="checkbox"/>
f. Cardiopulmonary resuscitation (CPR).....	<input type="checkbox"/>	<input type="checkbox"/>
g. Death and dying.....	<input type="checkbox"/>	<input type="checkbox"/>
h. Dental and oral health.....	<input type="checkbox"/>	<input type="checkbox"/>
i. Dietary behaviors and nutrition.....	<input type="checkbox"/>	<input type="checkbox"/>
j. Disease prevention and control.....	<input type="checkbox"/>	<input type="checkbox"/>
k. Emotional and mental health.....	<input type="checkbox"/>	<input type="checkbox"/>
l. Environmental health.....	<input type="checkbox"/>	<input type="checkbox"/>
m. First aid.....	<input type="checkbox"/>	<input type="checkbox"/>
n. Growth and development.....	<input type="checkbox"/>	<input type="checkbox"/>
o. HIV prevention.....	<input type="checkbox"/>	<input type="checkbox"/>
p. Human sexuality.....	<input type="checkbox"/>	<input type="checkbox"/>
q. Injury prevention and safety.....	<input type="checkbox"/>	<input type="checkbox"/>
r. Personal health.....	<input type="checkbox"/>	<input type="checkbox"/>
s. Physical activity and fitness.....	<input type="checkbox"/>	<input type="checkbox"/>
t. Pregnancy prevention.....	<input type="checkbox"/>	<input type="checkbox"/>
u. Reproductive health.....	<input type="checkbox"/>	<input type="checkbox"/>
v. Sexual harassment.....	<input type="checkbox"/>	<input type="checkbox"/>
w. Sexually transmitted disease (STD) prevention.....	<input type="checkbox"/>	<input type="checkbox"/>
x. Suicide prevention.....	<input type="checkbox"/>	<input type="checkbox"/>
y. Tobacco use prevention.....	<input type="checkbox"/>	<input type="checkbox"/>

**PLEASE CONTINUE
ON NEXT PAGE**



4. During this school year, have teachers in this school tried to improve any of the following student skills in a required health education course(s) in any of grades 6 through 12? (MARK YES OR NO FOR EACH RESPONSE.)

	YES	NO
a. Accessing valid health information, products, and services	<input type="checkbox"/>	<input type="checkbox"/>
b. Advocating for personal, family, and community health	<input type="checkbox"/>	<input type="checkbox"/>
c. Analysis of media messages	<input type="checkbox"/>	<input type="checkbox"/>
d. Communication	<input type="checkbox"/>	<input type="checkbox"/>
e. Decision making	<input type="checkbox"/>	<input type="checkbox"/>
f. Goal setting	<input type="checkbox"/>	<input type="checkbox"/>
g. Non-violent conflict resolution	<input type="checkbox"/>	<input type="checkbox"/>
h. Resisting social pressure for unhealthy behaviors (i.e., refusal skills)	<input type="checkbox"/>	<input type="checkbox"/>
i. Stress management	<input type="checkbox"/>	<input type="checkbox"/>

5. During this school year, has parental feedback caused teachers in this school to expand coverage or limit coverage on any of the following topics in a required health education course(s) for students in any of grades 6 through 12? (MARK ONE OPTION FOR EACH RESPONSE.)

	Expand coverage	Limit coverage	Neither expand nor limit
a. Alcohol and other drug use prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Chronic diseases such as diabetes and asthma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Community health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Conflict resolution/violence prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Consumer health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Cardiopulmonary resuscitation (CPR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Death and dying	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Dental and oral health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Dietary behaviors and nutrition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Disease prevention and control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Emotional and mental health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Environmental health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. First aid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Growth and development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. HIV prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Human sexuality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q. Injury prevention and safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r. Personal health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
s. Physical activity and fitness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
t. Pregnancy prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
u. Reproductive health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Sexual harassment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
w. Sexually transmitted disease (STD) prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
x. Suicide prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
y. Tobacco use prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. During this school year, has this school used any of the following strategies to involve parents in a required health education course? (MARK YES OR NO FOR EACH RESPONSE.)

	YES	NO
a. Sent health education materials to parents	<input type="checkbox"/>	<input type="checkbox"/>
b. Sent letters or newsletters on health education to parents	<input type="checkbox"/>	<input type="checkbox"/>
c. Provided school programs on health education for parents	<input type="checkbox"/>	<input type="checkbox"/>
d. Invited parents to attend health education class	<input type="checkbox"/>	<input type="checkbox"/>

7. During this school year, did you teach a required health education course for any of grades 6 through 12 in this school? (MARK ONE RESPONSE.)

☐ Yes
☐ No

PLEASE CONTINUE
ON NEXT PAGE



The following three (3) questions refer to HIV infection/AIDS education.

8. During this school year, did teachers in this school teach any of the following topics in a required health education course(s) for students in any of grades 6 through 12? (MARK YES OR NO FOR EACH RESPONSE.)

	YES	NO
a. How HIV is and is not transmitted	<input type="radio"/>	<input type="radio"/>
b. How HIV affects the immune system	<input type="radio"/>	<input type="radio"/>
c. Disease progression of AIDS	<input type="radio"/>	<input type="radio"/>
d. Needle-sharing behaviors that transmit HIV infection	<input type="radio"/>	<input type="radio"/>
e. Sexual behaviors that transmit HIV infection	<input type="radio"/>	<input type="radio"/>
f. Reasons for choosing sexual abstinence	<input type="radio"/>	<input type="radio"/>
g. Correct use of condoms	<input type="radio"/>	<input type="radio"/>
h. Condom efficiency/how well condoms work	<input type="radio"/>	<input type="radio"/>
i. Influence of alcohol and other drugs on HIV infection risk behaviors	<input type="radio"/>	<input type="radio"/>
j. Statistics on adolescent death and disability related to HIV infection/AIDS	<input type="radio"/>	<input type="radio"/>
k. Group attitudes (social norms) toward risk behaviors related to HIV infection	<input type="radio"/>	<input type="radio"/>
l. Statistics on the risk behaviors related to HIV infection among adolescents and adults	<input type="radio"/>	<input type="radio"/>
m. Information on HIV testing and counseling	<input type="radio"/>	<input type="radio"/>
n. Compassion and support for persons living with HIV infection/AIDS	<input type="radio"/>	<input type="radio"/>
o. Perceptions of risk for HIV infection/AIDS	<input type="radio"/>	<input type="radio"/>
p. Societal impact of HIV infection/AIDS	<input type="radio"/>	<input type="radio"/>

9. Do you teach about HIV infection/AIDS as part of a required health education course(s) for students in any of grades 6 through 12 in this school? (MARK ONE RESPONSE.)

☐ Yes

☐ No SKIP TO QUESTION 11.

10. Do any of the following issues make teaching about HIV infection/AIDS difficult for you? (MARK YES OR NO FOR EACH RESPONSE.)

	YES	NO
a. Inadequate training	<input type="radio"/>	<input type="radio"/>
b. Inadequate teaching materials	<input type="radio"/>	<input type="radio"/>
c. Large class size	<input type="radio"/>	<input type="radio"/>
d. Coed classes	<input type="radio"/>	<input type="radio"/>
e. Uncomfortable teaching about HIV risk behaviors	<input type="radio"/>	<input type="radio"/>
f. Other demands on class time	<input type="radio"/>	<input type="radio"/>
g. Parental concern or opposition	<input type="radio"/>	<input type="radio"/>
h. Community concern or opposition	<input type="radio"/>	<input type="radio"/>
i. Insufficient administrative support	<input type="radio"/>	<input type="radio"/>
j. Administrative restrictions	<input type="radio"/>	<input type="radio"/>
k. Low student interest or enthusiasm	<input type="radio"/>	<input type="radio"/>

PLEASE CONTINUE
ON NEXT PAGE



The following question refers to required HIV infection/AIDS education that is NOT taught as a separate course.

11. Is HIV infection/AIDS education taught in either of the following ways to students in grades 6 through 12 in this school? (MARK YES, NO, OR DON'T KNOW FOR EACH RESPONSE.)

	YES	NO	DON'T KNOW
a. Units or lessons on HIV infection/AIDS integrated into other subjects (such as home economics, science, or physical education).....	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Nonclassroom programs or activities (such as an assembly)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following two (2) questions refer to coordination of health-related activities between health education and other groups.

12. During this school year, have health education teachers in this school planned or coordinated health-related projects or activities with members of any of the following groups? (MARK YES OR NO FOR EACH RESPONSE.)

	YES	NO
a. Physical education teachers.....	<input type="radio"/>	<input checked="" type="radio"/>
b. Other subject area teachers	<input type="radio"/>	<input checked="" type="radio"/>
c. Food service staff	<input type="radio"/>	<input checked="" type="radio"/>
d. School health services staff.....	<input type="radio"/>	<input checked="" type="radio"/>
e. School counselors.....	<input type="radio"/>	<input checked="" type="radio"/>
f. Medical or public health persons.....	<input type="radio"/>	<input checked="" type="radio"/>
g. Local law enforcement.....	<input type="radio"/>	<input checked="" type="radio"/>
h. PTA/PTO	<input type="radio"/>	<input checked="" type="radio"/>

13. During this school year, has this school provided HIV infection/AIDS education for parents in any of the following ways? (MARK YES OR NO FOR EACH RESPONSE.)

	YES	NO
a. Sent educational materials on HIV infection/AIDS to parents	<input type="radio"/>	<input checked="" type="radio"/>
b. Sent letters or newsletters on HIV infection/AIDS to parents	<input type="radio"/>	<input checked="" type="radio"/>
c. Provided school programs on HIV infection/AIDS for parents.....	<input type="radio"/>	<input checked="" type="radio"/>
d. Invited parents to attend class on HIV infection/AIDS	<input type="radio"/>	<input checked="" type="radio"/>

PLEASE CONTINUE
ON NEXT PAGE

Ask about your professional preparation and

14. During the past two years, have you received four or more hours (at least 1/2 day) of inservice training and/or would you like to receive inservice training on the following health education topics? (MARK ONE OPTION FOR EACH RESPONSE)

	Received training	Want training	Received and want more training	Neither received nor want training
a. Alcohol and other drug use prevention.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Chronic diseases such as diabetes and asthma	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Community health.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Conflict resolution/violence prevention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Consumer health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Cardiopulmonary resuscitation (CPR)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Death and dying.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Dental and oral health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Dietary behaviors and nutrition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Disease prevention and control.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Emotional and mental health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Environmental health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. First aid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. Growth and development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. HIV prevention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
p. Human sexuality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
q. Injury prevention and safety.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
r. Personal health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
s. Physical activity and fitness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
t. Pregnancy prevention.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
u. Reproductive health.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
v. Sexual harassment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
w. Sexually transmitted disease (STD) prevention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
x. Suicide prevention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
y. Tobacco use prevention.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. What is your primary position in this school? (MARK ONE RESPONSE.)

- ☐ Health education and physical education teacher
☐ Health education teacher
☐ Physical education teacher
☐ Science teacher
☐ Home economics or family and consumer education teacher
☐ Family life education or life skills teacher
☐ School nurse
☐ Curriculum coordinator
☐ Other

16. Are you currently certified or endorsed by your state education agency to teach health education in the grades you now teach? (MARK ONE RESPONSE.)

- ☐ Yes
☐ No, but certification is available in this state
☐ No, but certification is NOT available in this state

17. What was the major emphasis of your professional preparation? (MARK ONE RESPONSE.)

- ☐ Health education and physical education
☐ Health education
☐ Physical education
☐ Science
☐ Family life education or life skills teacher
☐ Counseling
☐ Nursing
☐ Elementary education
☐ Other

18. Including this school year, how many years have you been teaching health education? (MARK ONE RESPONSE.)

- ☐ 1 year
☐ 2 to 5 years
☐ 6 to 9 years
☐ 10 to 14 years
☐ 15 years or more

Thank you for your responses.
Please return this questionnaire.

1998 NEW JERSEY SCHOOL HEALTH EDUCATION PROFILE

QUESTIONNAIRE INSERT FOR LEAD HEALTH EDUCATION TEACHER Instructions

Please answer the following additional open ended questions concerning curriculum and teacher in-service trainings.

School name: _____

District: _____

19. Does your school use purchased textbooks or materials in the delivery of its health education curriculum?

☐ no
☐ yes

If yes, please give the name, publisher and date of the materials.

20. Does your school use purchased textbooks or materials to provide instruction in HIV/AIDS prevention?

☐ no
☐ yes

If yes, please give the name, publisher and date of the materials.

21. Is your district currently engaged in revising the health curriculum used by this school?

☐ no
☐ yes

If yes, what challenges or issues do you face in the revision process?

22. Please list the three providers of in-service and continuing education most used by teachers of health education in your school over the past two years. Please include the name of the individual or training unit, if known.

Trainer/Training Unit

Organization

The Department of Education, Office of Educational Support Services and Interagency Initiatives, welcomes any additional comments you wish to direct to us; you may use the last page of the survey for this purpose. Thank you for your cooperation.

**1998 NEW JERSEY SCHOOL HEALTH EDUCATION PROFILE
QUESTIONNAIRE INSERT FOR LEAD HEALTH EDUCATION TEACHER**

h

Appendix D Consent Form

OLD BRIDGE HIGH SCHOOL

Office of the Principal

"It Takes A Whole Village to Raise A Child"

CONSENT FORM

PARENT NOTIFICATION FORM

Our district needs to be prepared for the New Jersey Core Curriculum Standards. In order to accomplish this task, we will be assessing the present health curriculum by administering an HIV/AIDS knowledge survey in grades 9-12. The survey will attempt to measure the students' knowledge of HIV/AIDS, so that we will have a better understanding as to what the curriculum may or may not be providing. Questions will be about HIV/AIDS. The questionnaire has been approved by the superintendent of schools, assistant superintendent of curriculum, and the high school principal. Completing this paper and pencil survey poses no risk to your child. Survey procedures have been designed to protect your child's privacy and allow for anonymous participation. It is very important that all students participate. However, the decision to participate is strictly voluntary.

Please read the section below. If you have any questions, please contact Mrs. Dona Ryan, Director of Physical Education and Health at Old Bridge High School (732-360-4422). You only need to return this form by December 1, 1998, to the main office, if you do **NOT** give your child permission to take the survey. Thank you in advance for your anticipated cooperation.

=====

Child's name: _____ Grade: _____

I have read the above summary and understand this form concerning the HIV/AIDS survey.

_____ My child does not have my permission to participate in the survey.

Parent's signature: _____

Phone number: _____ Date: _____

Appendix E Student Assent Form

STUDENT ASSENT FORM

FEBRUARY, 1999

Our district needs to prepare for the New Jersey Core Curriculum Standards. In order to accomplish this task, we will be assessing the present health curriculum by administering an HIV/AIDS knowledge survey in grades 9-12. The survey will attempt to measure the students' knowledge of HIV/AIDS, so that we will have a better understanding as to what the curriculum may or may not be providing. Questions will be about HIV/AIDS. The questionnaire has been approved by the superintendent of schools, the assistant superintendent of curriculum, and the high school principal. Completing this paper and pencil survey poses no risk to you. Survey procedures have been designed to protect your privacy and allow for anonymous participation. It is very important that all students participate. However, the decision to participate is strictly voluntary.

I have read the above summary and understand this form concerning the HIV/AIDS survey.

_____ I agree to participate in the HIV/AIDS Knowledge Survey

_____ I do NOT agree to participate in the HIV/AIDS Knowledge Survey.

Appendix F Instructions for Teacher's Administering the Test

INSTRUCTION FOR THE TEACHER ADMINISTERING THE TEST
OLD BRIDGE HIGH SCHOOL
DURING THE WEEK OF DECEMBER 10-15,1998

(PLEASE READ THE FOLLOWING INSTRUCTIONS)

1. You are being asked to provide information for the research about HIV/AIDS. Please fill out the first page answering all the questions. You are not required to give your name and no grade will be given for this test. All the information is confidential and will only be used for research purposes.
2. Answer all of the questions to the best of your ability. Please do not leave any blanks. Note that some pages are two-sided. Make sure you turn the page and answer both sides.
3. Your help is greatly appreciated and will assist in improvements in the curriculum and to prevent the spread of HIV/AIDS.
4. Place the completed questionnaire in the envelope in the teacher's desk. The questionnaire will only be seen by the researcher and destroyed upon data collection.
5. Please remain quietly in your seats after you have completed the questionnaire.

Teachers, please group each class separately, write the class period on top of first survey, place your name on the outside of the envelope and return to Dawn Forgeron at your earliest convenience.

Appendix G Letters of Consent

OLD BRIDGE HIGH SCHOOL

Route 516
Old Bridge, New Jersey 08857



East Campus
Christopher Traficante, Ed. D.
Principal
(732) 290-3901
John R. Czubati
First Vice Principal
(732) 290-3901
Dawn M. Forgerson
Vice Principal
(732) 290-3902
Douglas J. O'Connell
Vice Principal
(732) 290-3903
FAX (732) 566-1263

November 2, 1998

To Whom It May Concern:

This will serve as an affirmation that I have given Ms. Dawn Forgerson permission to conduct an HIV/AIDS Education Survey test in Grades 9 thru 12 at Old Bridge High School.

Should you need verbal confirmation you may contact me at 290-3901.

Sincerely,

A handwritten signature in black ink, appearing to read 'Christopher Traficante', written over a horizontal line.

Christopher Traficante, Ed.D.
Principal



126
Old Bridge Township Public Schools
Patrick A. Torre Administration Building
Route 516
Matawan, New Jersey 07747
FAX (732) 583-4644

Dr. Daniel M. Rodriguez
Superintendent of Schools
(732) 290-3976

Dr. R. Gregory Quirk
Asst. Superintendent for
Business &
Board Secretary
(732) 290-3952

Dr. Ernest H. Smith, Jr.
Asst. Superintendent for
Curriculum & Instruction
(732) 290-3968

Dr. Joan M. George
Asst. Superintendent for
Personnel
(732) 290-3970

Arthur H. Freihon
Supervisor of
Administrative Services
(732) 290-3963

November 3, 1998

To Whom It May Concern:

Ms. Dawn Forgerson has been approved to conduct a research project for the Old Bridge High School District in the fall of 1998. The research project includes a 9th- 12th grade assessment of the current health curriculum specifically, HIV/AIDS and a Teacher/Student Perception Profile.

Old Bridge High School will benefit from this to prepare for the New Jersey core Curriculum Standards as well as with regard to HIV/AIDS education. We look forward to working with Dawn Forgerson.

Sincerely,

Daniel M. Rodriguez, Ed.D.
Superintendent of Schools